Appendix D

Main References for the Report

Parts I, II, III, and IV

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References

Abernathy, Sandra M. and Pettibone, Timothy J. (1984). "Computer Literacy and Certification: What States Are Doing," Technological Horizons in Education, vol. 12, no. 4, November, pp. 117-19.

Abernathy, William J. and Utterback, James M. (1976). "Innovation and the Evolution of Technology in the Firm," Harvard University, Harvard Business School [Cambridge, MA], June.

Ackoff, Russell L. and Emery, Fred E. (1972). On Purposeful Systems (Formerly Choice, Communication, and Conflict). Seaside, CA: Intersystems Publications.

Advertising Age (1984). "'Computer Instructor' Set," Advertising Age, vol. 55, no. 67, Oct. 8, p. 32.

Alaska State Dept. of Education. Office of Educat. Tech. and Telecommunication (1983). "The Feasibility of Computer Networking in Education. A Study Submitted to the Thirteenth Session of the Alaska State Legislature," Alaska State Dept. of Education. Office of Educat. Tech. and Telecommunication [Juneau, AK], January.

Alder, Henry et al. (undated). Texbook Standards Report. Sacramento, CA: California State Board of Education.

Aldrich, Robert F., Belair, Robert R., Braunstein, Yale M., Peyton, David Y., Pogrow, Stanley, Roberston, Lawrence S., and Wildavsky, Aaron B. (1981). Issues in Information Policy. Washington, DC: U.S. Department of Commerce, National Telecommunications and Inf. Admin., February.

Allen, Thomas J. (1977). Managing the Flow of Technology. Cambridge, MA: MIT Press.

Anandam, Kamala (1986). "Technology for Education: Promises and Problems," New Directions for Community Colleges, vol. 14, no. 3, Fall, pp. 65-72.

Anderson, John (1981). "State Support for Computer Dissemination: A Reassessment of California's Public Network for Instructional Development," Technological Horizons in Education, vol. 8, no. 5, September, pp. 54-56+.

Anderson, John J. (1987). "Apples for Education: Decade of Making the Grade," Computer Shopper, September, pp. 19-20+.

Anderson, John J. (1987). "Computers in Education: The Pitfalls," *Computer Shopper*, September, p. 199+.

Arons, Stephen (1986). *Compelling Belief: The Culture of American Schooling*. Amerhest, MA: The University of Massachusetts Press.

Arrow, Kenneth J. (1971). "Economic Welfare and the Allocation of Resources for Invention" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd.

Arrow, Kenneth J. (1979). "The Economics of Information" in *The Computer Age: A Twenty-Year View* (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, pp. 306-317.

Ashmore, Timothy M. (1984). "Evaluating CAI Material for the Microcomputer" in *Annual Meeting of the Speech Communication Association* (Chicago, IL, November 1984). Annandale, VA: Speech Communication Association, November.

Association for the Development of Computer-based Instructional Systems (1986). *ADCIS Conference Proceedings* (27th, New Orleans, Louisiana, February 3-6, 1986). Bellingham, WA: Association for the Development of Computer-based Instructional Systems, February.

Back, Frank E. (1968). *Economics: An Introduction to Analysis and Policy*. Englewood Cliffs: Prentice-Hall, Inc.

Batey, Anne (1985). "Integrating Microcomputers into Science Education. Computer Technology Program Reports to Decision Makers.," *Northwest Regional Educational Laboratory* [Portland, OR], no. 6, November.

Bator, Francis M. (1958). "The Anatomy of Market Failure," *The Quarterly Journal of Economics*, vol. 72, August, pp. 351-379.

Baumgarten, Jon A. (1983). "Will Copyright Survive the New Technologies," *American Society for Information Science Bulletin*, August, pp. 20-22.

Baumol, William J. and Ordover, Janusz A. (1975). *On the Optimality of Public-Goods Pricing with Exclusion Devices*. New York: New York University Department of Economics, Center for Applied Economics, November.

Baumol, William J. and Ordover, J.A. (1976). "Private Financing of Information-Transfer - Theory and Execution," *Proceedings of the American Society for Information Science*, vol. 13, pp. 88-.

Baumol, William J. *et al*. (1980). *Manual of Pricing and Cost Determination for Organizations Engaged in Dissemination of Knowledge*. New York: New York University.

Becker, Henry Jay (1983). "How Schools Use Micro-Computers," Classroom Computer Learning, vol. 4, no. 2, September, pp. 41-42.

Becker, Henry (1983). School Uses of Microcomputers. Baltimore, MD: The John Hopkins University.

Becker, Henry Jay (1985). "Men and Women as Computer-Using Teachers," Sex Roles, vol. 13, no. 3, August, pp. 137-48.

Becker, Henry Jay (1987). "Instructional Uses of School Computers: Reports from the 1985 National Survey," The Johns Hopkins University, Center for Social Organization of Schools [Baltimore, MD], no. 4, June.

Bell, Daniel (1979). "The Social Framework of the Information Society" in The Computer Age: A Twenty-Year View (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, pp. 163-211.

Bell, T. H. (1983). "Industrial Policy: Implications for American Education. Delivered by Dr. Robert W. Worthington on Behalf of Dr. T. H. Bell, U.S. Secretary of Education," U.S. Department of Education, Office of the Secretary [Washington, DC], Oct 19.

Ben-Ner, Avner (1986). "Nonprofit Organizations: Why Do They Exist in Market Economies" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, pp. 94-113.

Bendaniel, D.J. (1974). A Study of Severed Venture Mechanism for Technological Innovation and Its Broader Application to American Industry. Schenectady, NY: General Electric Co., The Technical Ventures Operation, December.

Berman, Jason S. (1987). "A Threat to the Recorded-music Industry," Boston Globe, August 14, p. 15.

Besen, Stanley M., Manning, Willard G., Jr., and Mitchell, Bridger M. (1978). "Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem," The Journal of Law & Economics, vol. 21, no. 1, April, pp. 67-95.

Besen, Stanley M. (1984). The Effect of Reproduction Technology on Intellectual Property. Cambridge, MA: MIT Research Program on Communications Policy, March 22.

Bikson, Tora (1987). "Understanding the Implementation of Office Technology" in Technolology and the Transformation of White Collar Work. Hillsdale, NJ: Erlbaum Associates, pp. 155-176.

Black, P. (1985). "Tink Tonks for High-Tech Tots," Venture, March, p. 92+.

Blair, Marjorie and Lobello, Sharon (1984). "People Shaping Educational Computing," *Electronic Education*, vol. 3, no. 8, May-June, pp. 14-16+.

Blaschke, Charles L. (1982). "Microcomputers in Special Education: Trends and Projections," *Journal of Special Education Technology*, vol. 5, no. 4, Fall, pp. 25-27.

Bok, Derek (1985). "Looking into Education's High-Tech Future," *EDUCOM Bulletin*, vol. 20, no. 3, Fall, pp. 2-10.

Bonja, Robert P. and Rogers, Robert J. (1984). ""Evolution of Curriculum . . . Before, Into, and Beyond Computer Literacy" in Annual Meeting of the National Council of States on Inservice Education (9th, Orlando, Fl, November 16-20, 1984)," *ERIC Document Reproduction Service* [Alexandria, VA], Nov. 16.

Bonner, Paul (1984). "Toward a More Thoughtful Use of Computers in Education," *Personal Computing*, vol. 8, no. 2, March, p. 153+.

Bork, Alfred (1981). *Learning with Computers*. Bedford, MA: Digital Press.

Bork, Alfred (1982). "The Fourth Revolution -- Computers and Learning" in *The Computer*: *Extension of the Human Mind*. *Proceedings*, *Annual Summer Conference* (3rd, Eugene, OR, July 21-23, 1982). Eugene, OR: University of Oregon, College of Education, July.

Boston Globe (1987). "Tandy Upstages IBM with 4 New Computers," *Boston Globe*, p. 38.

Boulding, Kenneth E. (1971). "The Economics of Knowledge and the Knowledge of Economics" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd.

Bowler, Mike (1978). "Textbook Publishers Try to Please All, But First They Woo the Heart of Texas," *The Reading Teacher*, vol. 31, no. 5, February, pp. 515-518.

Bozeman, William C. (1984). "Strategic Planning for Computer-Based Educational Technology," *Educational Technology*, vol. 24, no. 5, May, pp. 23-27.

Braden, Roberts A. (1986). "Instructional Design: Technology at Risk (Commentary on the National Task Force on Educational Technology)," *Educational Technology*, vol. 26, no. 10, October, pp. 33-34.

Branscomb, Lewis M. (1985). "Insights: Technology Promotion: What the Fed Should and Should Not Do," *High Technology*, vol. 5, no. 5, May, pp. 11,14.

Braunstein, Yale M. (1975). *An Economic Rationale for Page and Submission Charges by Academic Journals*. New York: New York University Department of Economics, Center for Applied Economics, August.

Braunstein, Yale M. (1976). "Information as a Commodity," AAAS Meetings [Boston], February.

Braunstein, Yale M. (1976). "Public-Policy and Research on Economics in Information-Transfer," Proceedings of the American Society for Information Science, vol. 13, pp. 7-.

Braunstein, Yale M. (1979). "Costs and Benefits of Library Information: The User Point of View," Library Trends, vol. 28, no. 1, Summer, pp. 79-87.

Braunstein, Yale M. (1981). "The Functioning of Information Markets" in Issues in Information Policy (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February, pp. 57-74.

Braunstein, Yale (1981). "Information as a Commodity: Public Policy Issues and Recent Research" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press.

British Business (1984). "Dutch Government Orders British Educational Software," British Business, vol. 15, no. 14, Dec. 7, p. 602.

British Business (1984). "Software for Schools: UK Shows Its Lead at Didacta," British Business, vol. 13, no. 13, March 30, p. 612.

Brink, Dan (1986). "MLJ Computer Corner (Software piracy problems)," Modern Language Journal, vol. 70, no. 3, Autumn, pp. 278-82.

Brodinsky, Ben (1985). Improving Math & Science Education: Problems & Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators.

Brown, George W., Miller, James G., and Keenan, Thomas A. (1967). Edunet: Report of the Summer Study on Information Networks. New York: John Wiley & Sons, Inc.

Burger, Michael L. (1986). "Authoring Languages/Systems Comparisons," AEDS Journal, vol. 19, no. 2, Win-Spr, pp. 190-209.

Business Week (Industrial Edition) (1984). "Educational Software: Why It's a Hard Sell," Business Week (Industrial Edition), Oct. 29, pp. 121-126.

Cahn, Dudley D. (1985). "Information Technology and Interpersonal Behavior: Impact on Supervisor-Subordinate and Teacher-Student Relationships" in Annual Meeting of the Eastern Communication Association (76th, Providence, RI, May 2-5, 1985). Alexandria, VA: ERIC Document Reproduction Service, May.

Canter, Marc (1986). Important Issues Affecting the Educational Marketplace. Chicago, IL: MacroMind, Inc.

Carl, David L. and Hoelscher, Sheila (1984). "Administrators' Perceptions of Computer Usage in Education" in Annual Meeting of the Assocation of Educational Communications and Technology (Dallas, TX, January 20-24, 1984). Washington, DC: Association for Educational Communications and Technology, Jan. 20.

Carnine, Doug et al. (1984). The Role of Technology in School Improvement. A Presenter's Guide. Research Based Training for School Administrators. Eugene, OR: Oregon University, Center for Educational Policy and Management.

Casper, Cheryl A. (1981). "Economic Pricing Models and Their Application to Library Services" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press.

Chartrand, Robert L. and Miller, Nancy R. (1983). Information Policy: Public Laws from the 97th Congress. Washington, DC: U.S. Congressional Research Service, March.

Christie, Betti J. and Dolan, Dan (1982). "Montana's Task Force on Computer Education," Technological Horizons in Education, vol. 10, no. 2, November, pp. 91-92.

Cicchelli, Terry and Baecher, Richard (1985). "Introducing Microcomputers into the Classroom: A Study of Teacher's Concerns," Journal of Educational Computing Research, vol. 1, no. 1, January, pp. 55-65.

Classroom Computer News (1983). "Pennsylvania: Improving Schools through Technology," Classroom Computer News, vol. 3, no. 5, April, p. 25.

Clayre, Alasdair (ed.) (1980). The Political Economy of Co-operation and Participation. London: Oxford University Press.

Clay, Katherine ed. (1982). Microcomputers in Education: A Handbook of Resources (Preface by LeRoy Finkel). Phoenix, AZ: Oryx Press.

Cleveland, Harlan (1982). "Information as a Resource," The Futurist, December, pp. 34-39.

Cohen, Mollie L. (1983). "Computer Corner (How social studies teacher successfully marketed own tutorial programs)," Social Education, vol. 47, no. 6, October, pp. 456-59.

Collins, Sue (1983). Computer Technology in Curriculum and Instruction Handbook: Resources (Washington Office of the State Superintendent of Public Instruction, Olympia). Alexandria, VA: ERIC Document Reproduction Service, December.

Cooper, Michael D. (1973). "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science.

Cooper, Michael D. (1983). "The Structure and Future of the Information Economy," Information Processing & Management, vol. 19, no. 1, pp. 9-26.

Corporation for Public Broadcasting (1986). Future School Market for Instructional Programming and Services through 1990. Executive Summary. Washington, DC: Corporation for Public Broadcasting, March.

Craighead, Donna, Bitter, Gary G., eds. (1984). The Best of the Proceedings 1982-1984: Microcomputers in Education Conference. Rockville, MD: Computer Science Press.

Crew, Michael A. (1984). "Royalty Contracts: An Efficient Form of Contracting?," Southern Economic Journal, vol. 50, no. 3, pp. 724-733.

Crist-Whitzel, Janet L. et al. (1986). "Patterns of Implementing a District Computerized Instructional Management System," Far West Lab. for Educational Research and Development [San Francisco, CA], April.

Cronin, Blaise (1986). ""Towards Information-Based Economies" in Annual Lazerow Memorial Lecture (3rd, Bloomington, IN, April 2, 1986)," ERIC Document Reproduction Service [Alexandria, VA], April 2.

Cropp, J. A. D., Harris, D. C., and Stern, E. S. (1970). Trade in Innovation: The Ins and Outs of Licensing. London: Wiley - Interscience, John Wiley & Sons Ltd.

Cross, Melvin L. and Ekelund, Robert B., Jr. (1981). "A. T. Hadley: The American Invention of the Economics of Property Rights and Public Goods," Review of Social Economy, pp. 37-50.

Crowell, Carol A. (1985). "Goodbye, Little Red Schoolhouse," Creative Computing, vol. 11, no. 4, April, pp. 64-68+.

Curry, B. (1984). State Leadership Assistance for Technology in Education (Project SLATE). Falls Church, VA: Education Turnkey Systems, Inc., September.

Currence, Cindy K. (1986). "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis.

Dagnese, Joseph M. (1984). "The Time of the Parenthesis: Moving Toward the Future," Special Libraries, vol. 75, no. 2, April, pp. 155-63.

Dede, Christopher J., Zodhiates, Philip P., and Thompson, Charles L. (1985). Intelligent Computer-Assisted Instruction: A Review and Assessment of ICAI Research and Its Potential for Education. Newton, MA: Education Development Center, May.

Dertouzos, James N. and Wildman, Steven S. (1981). "A Study of Economic Issues in the Recording Industry" in Copyright Issues: Cable Television and Performance Rights (Serial No. 28). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, August, pp. 699-778.

Dertouzos, Michael L., Moses, Joel, eds. (1979). The Computer Age: A Twenty-Year View. Cambridge, MA: MIT Press.

Diem, Richard A. (1984). "Social Implications of Technological Innovations: A Study of Ethics and Attitudes" in Annual Meeting of the National Council for the Social Studies (64th, Washington, DC, November 15-19, 1984). Washington, DC: National Council for Social Studies, November.

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang (1984). New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October.

Dreher, Heinz V. (1984). "Electronic Mail: An Exemplar of Computer Use in Education," Educational Technology, vol. 24, no. 8, August, pp. 36-38.

Easley, David and O'Hara, Maureen (1986). "Optimal Nonprofit Firms" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press.

Educational Products Information Exchange Institute (1984). "Research Indicates Stalled Software Evolution" in Microgram. Water Mill, NY: Educational Products Information Exchange Institute.

Educational Research Service, ERS School Research Forum (1983). Education for a High Technology Future: The Debate over the Best Curriculum. Arlington, VA: Educational Research Service, ERS School Research Forum.

Educational Technology (1986). "Technically Speaking.... An Occasional Column of Editorial Opinion. Yes, There Really is an Education Market for Technology," Educational Technology, vol. 26, no. 2, February, p. 8.

Electronic Learning (1983). "ICCE Publishes Statement on Software Copyright Violations," Electronic Learning, vol. 3, no. 2, October, p. 22.

Estes, Nolan and Klier, Betje (1985). "An International Study of the Impact of New Information Technologies on Curriculum and Institutional Structures" in Annual Meeting of the American Educational Research

Association (Chicago, IL, March 31-April 4, 1985). Washington, DC: American Educational Research Association.

Ewald, William R. Jr. (1975). Information, Perception and Regional Policy (In support of the National Science Foundation, Research Applied to National Needs). Washington, DC: American Society of Landscape Architects Foundation.

Fahy, Patrick J. (1985). "Instructor Attitudes Affecting Adoption of Instructional Innovations," AEDS Journal, vol. 19, no. 1, Fall, pp. 66-79.

Fain, David (1974). Background Study of Alternative Policies Which Would Promote University Financed Technological Innovation. Berkeley, CA: Teknekron, Inc., December.

Fantini, Mario D. and Cadwallader, Lynn J. (1983). "Issues in Education. An Examination," University of Massachusetts, School of Education [Amherst, MA].

Ferris, Charles D. (1987). "Digital Recorders: An Audio Leap Ahead," Boston Globe, August 14, p. 15.

Field, Anne R. (1987). "U.S. Publishers Want to Maximize the 'MINITEL' Potential," Business Week (Industral Edition), July 6, p. 86C.

Florida State Dept. of Education. Office of Educational Technology (1986). Florida Computing Activities, 1986. Tallahassee, FL: Florida State Dept. of Education. Office of Educational Technology.

Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp. (1986). "A Network for Teacher Support -- Report of the Commissioner's Task Force on Instructional Computing," Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp. [Tallahassee, FL], Feb. 10.

Fox, Wendy (1986). "Kennedy asks $100m for 'Star Schools' (National program to use satellites to link students with one professor via two-way television)," Boston Globe, March, p. 21.

Frazier, Donald (1985). "Piracy Study: 50% of Software Copied Illegally," PC Week, vol. 2, no. 3, January 22, p. 1+.

Friedman, Daniel (1982). "Towards Professional Literacy in Educational Computing," Educational Computer, vol. 2, no. 6, Nov.-Dec., pp. 28-29.

Fuchs, Victor E. (1982). "Software Publication Considerations and Special Education," Journal of Special Education Technology, vol. 5, no. 4, Fall, pp. 71-74.

Fuchs, Victor E. (1983). "Software Marketing Considerations" in Conference on the Use of Microcomputers in Special Education (Hartford, CT, March 10-12, 1983). Reston, VA: Council for Exceptional Children, March.

Fullan, Michael (1983). "Change Processes and Strategies at the Local Level" in National Institute of Education Conference on State and Local Policy Implications of Effective School Research. Washington, DC: Dingle Associates, Inc., June.

Gardner, David Pierpont (1986). "The Charge of the Byte Brigade: Educators Lead the Fourth Revolution," Educational Record, vol. 67, no. 1, Winter, pp. 10-15.

Gee, Sherman (1981). Technology Transfer, Innovation, and International Competitiveness. New York: John Wiley & Sons.

Geer, Jay D. (1985). "Sponsoring Educational Software," Public Relations Journal, vol. 41, no. 12, December, pp. 15-16.

Gelfand, M. H. (1984). "Dalton Expands Software Unit," Advertising Age, vol. 55, no. 70, Oct. 18, p. 56.

Gelfond, Susan (1987). "A Bill That Separates Software Renters From Pirates (Computer Software Rental Act of 1987 supported by SPA and Rep. Patricia Schroeder)," Business Week (Industrial Edition), May 11, p. 136C.

Gelfond, Susan (1987). "This Seal of Approval Means Your Computer Can Talk to Others," Business Week (Industrial Edition), April 27, p. 114C.

Gelling, Irving ed. (1983). "Apples for Teachers Pay Off (educational market for microcomputers and software)," High Technology, vol. 3, no. 4, April, p. 45.

Georgia State Department of Education (1985). Educational Technology: Local Planning Guide. Atlanta, GA: Georgia State Department of Education.

Gibbons, L. (1986). "Escape or Run?," Journal of Computer Assisted Learning, vol. 2, no. 1, Mar-Apr, pp. 22-27.

Gillies, Donald J. (1986). "CAL in Canada: Innovations and Their Sources in Teaching and Learning," Computers and Education, vol. 10, no. 1, January, pp. 221-27.

Gillespie, Junetta (1983). "Striking the "R": Demythologizing the 'Computer Revolution'," NALLD Journal, vol. 17, no. 3, Spr-Sum, pp. 4-12.

Gillingham, Mark, Murphy, Patricia, Cresci, Kay, Klevenow, Spencer, Sims-Tucker, Bernite, Slade, Debbie, and Wizer, David (1986). "An Evaluation of Computer Courseware Authoring Tools and a Corresponding Assessment Instrument for Use by Instructors," Educational Technology, vol. 26, no. 9, September, pp. 7-12.

Glatthorn, Allan A. (1987). *Curriculum Renewal* (Manual for educators to use in curriculum planning and development). Alexandria, VA: Association for Supervision and Curriculum Development.

Goldin, Hyman H. (1969). "Financing Public Broadcasting," *Communications*, Summer, pp. 650-670.

Goldstein, Paul (1979). *Schooling, Technology, and Law*. Lexington, MA: Lexington Books (D.C. Heath & Co.).

Goldhor, Richard S. and Lund, Robert T. (1981). *University-to Industry Technology Transfer: A Case Study in Advanced Technology*. Cambridge, MA: MIT Center for Policy Alternatives, November.

Gordon, Wendy J. (1982). "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," *Columbia Law Review*, vol. 82, pp. 1600-1657.

Gorny, Peter (1982). "New Information Technologies in Education in the Federal Republic of Germany," *European Journal of Education*, vol. 17, no. 4, pp. 339-53.

Goulden, Joseph C. (1971). *The Money Givers: An Examination of the Myths and Realities of Foundation Philanthropy in America*. New York: Random House.

Gray, Peter J. (1984). "Policy Analysis: A Tool for Setting District Computer Use Policy. Paper and Report Series No. 97," *Northwest Regional Educational Laboratory* [Portland, OR], May.

Greenfield, Patricia Marks (1984). *Mind and Media: The Effects of Television, Video Games, and Computers*. Cambridge, MA: Harvard University Press.

Gusse, David R. and Lancaster, Kent M. (1983). "Using On-Line Services Makes Course More Realistic," *Journalism Educator*, vol. 38, no. 3, Autumn, pp. 6-10.

Hall, Kent (1981). "The Economic Nature of Information," *The Information Society*, vol. 1, no. 2, pp. 143-166.

Hansmann, Henry B. (1986). "The Role of Nonprofit Enterprise" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, pp. 57-84.

Hansen, Kenneth H. (1983). "Megatrends in American Society: Policy Issues for State Education Agencies. An Issues Analysis Paper.," *Northwest Regional Education Laboratory* [Portland, OR], June.

Harmon, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D. (1977). *Technological Innovation by Firms: Data Appendixes on Computers and Machine Tools*. Santa Monica, CA: Rand Corporation, November.

Harman, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D. (1977). *Technological Innovation by Firms: Enhancement of Product Quality*. Santa Monica, CA: Rand Corporation, November.

Harrison, John S. (1986). "Microcomputers and Second Language Teaching: The Second Wave. Q&A," *ERIC Clearinghouse on Lanuguages and Linguistics* [Washington, DC], November.

Harris, Martin L. *et al*. (1985). "Guidelines for Educational Software in California Schools. Revised," *California State Dept. of Education* [Sacramento, CA], Sept. 17.

Harvard University, Educational Technology Center (1986). *Teacher as Learner: The Impact of Technology*. Cambridge, MA: Harvard University, Educational Technology Center, May.

Haskell, Francis (1963). *Patrons and Painters*. New York: Alfred A. Knopf.

Heller, A. (1984). "Software for Storybooks," *Venture*, vol. 6, no. 4, April, pp. 18-19.

Helm, Virginia (1984). *Software Quality and Copyright: Issues in Computer-Assisted Instruction*. Washington, DC: Association for Educational Communications and Technology.

Helm, Virginia M. (1985). "Copyright Issues in Computer-Assisted Instruction" in *School Law Update 1985* (Edited by Thomas N. Jones and Darel P. Semler). Topeka, KS: National Organization on Legal Problems in Education.

Herber, Bernard P. (1971). *Modern Public Finance: The Study of Public Sector Economics*. Homewood, IL: Richard D. Irwin, Inc.

Hershey, Jacqueline A. (1987). "How Schools Sabotage a Creative Work Force: The Meaningless Repetition that is found even in Award-winning Schools is Driving Children away from Math and the Sciences. America Can't Afford that.," *Business Week* (Industrial Edition), July 13, p. 16.

Heuston, Dustin H. (undated). *An English Teacher's Conversion to Technology*. Orem, UT: WICAT Systems, Inc.

Heuston, Dustin H. (1985). "Some of the Critical Issues in Introducing Computer Technology into Schools," *WICAT, Inc*. [Orem, UT], January.

Heuston, Dustin H. (1986). The Future of Education: A Time of Hope and New Delivery Systems. Orem, UT: WICAT, Inc.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, et al. (1980). Government Policy, Technological Innovation, and Alternative Energy. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June.

Hill, Christopher T., Priest, W. Curtiss, et al. (1980). Supporting Innovation: A Policy Study. Cambridge, MA: MIT Center for Policy Alternatives.

Hindle, Anthony and Raper, Diane (1976). "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science.

Hitchcock, Richard B. (1984). "The Software Jungle: Guidelines for Evaluating English Computer Programs" in Annual Meeting of the Developmental Studies Conference (9th, Athens, GA, April, 1984). Alexandria, VA: ERIC Document Reproduction Service.

Hoke, Mary Ellen (1984). Research Report on the Japanese School System, Computer-Aided Instruction in Japan and the Japanese Home Computer Market. Boston, MA: Houghton Mifflin Co.

Hollomon, J. Herbert, Allen, Thomas J. Jr., Ashford, Nicholas A., et al. (1975). National Support for Science & Technology: An Examination of Foreign Experience: Summary. Cambridge, MA: MIT Center for Policy Alternatives, August 18.

Hollomon, J. Herbert, Heaton, George R., et al. (1978). Government Involvement in the Innovation Process: Policy Implications (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31.

Holmes, Edith (1985). "DBMS for Kids," Datamation, vol. 31, no. 8, Apr. 15, pp. 70-78.

Hood, John F. et al. (1985). Microcomputers in Schools, 1984-85. A Comprehensive Survey and Analysis. Westport, CN: Market Data Retrieval, May.

House, Robert W., Nash, Robert T., and Goodrich, Robert S. (1977). Formulating Public Policy to Improve Productivity Through Technological Innovation. Nashville, TN: Vanderbilt University, Technology and Public Policy Program, September.

Hubert, D. (1984). "Public and Private Sectors Team to Create the Ideal Program," Public Relations Journal, vol. 40, no. 7, July, p. 40.

Hurly, Paul and Hlynka, Denis (1984). "Prisoners of the Cave: Can Instructional Technology Improve Education?," Computers and Education, vol. 8, no. 4, pp. 427-34.

IFO - Institut fur Wirtschaftsforschung (1980). IFO Investment Test (Survey of Innovation in Firms). Munchen, Germany: IFO - Institut fur Wirtschaftsforschung.

Institute for Educational Leadership. (1981). Technology and Education: Policy, Implementation, Evaluation (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership.

International Council for Computers in Education (1985). ICCE Policy Statement on Network and Multiple Machine Software. Eugene, OR: International Council for Computers in Education.

Isherwood, Geoffrey B. (1985). "The Principal and the Pauper: Administrator Training in Computer Technology," Education Canada, vol. 25, no. 4, Winter, pp. 4-9.

Jamison, D., Klee, S., and Wells, S. (1978). The Costs of Educational Media. Beverly Hills, CA: Sage Publications, Inc.

Jobe, Holly (1985). "Are You Breaking Software Laws?," American School and University, vol. 57, no. 10, June, pp. 13,16.

Johnston, Jerome (1985). "Computers and the Schools: The Next Decade," University of Michigan, Inst. for Social Research [Ann Arbor, MI], March.

Jones, H. Ralph (1969). Constraints to the Development and Marketing of Medical Electronic Equipment. Ann Arbor: University of Michigan, Institute of Science and Technology.

Jorde, Paula (1985). "Computer Technology in the Educational Setting: The Role of Administrators in the Innovation Decision Process" in World Assembly of the International Council on Education for Teaching (32nd, Vancouver, British Columbia, Canada, July 22-26, 1985). Washington, DC: International Council on Education for Teaching, July.

Judd, Wallace (1983). "A Teacher's Place in the Computer Curriculum," Phi Delta Kappan, vol. 65, no. 2, October, pp. 120-22.

Justiz, Manuel J. (1984). ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," Harvard University, Educational Technology Center [Cambridge, MA], Feb. 6.

Kahin, Brian (1986). "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ].

Kahn, Sharon (1986). "Very Good," *Venture*, vol. 8, no. 9, September, pp. 50-59.

Kamien, Morton I. and Schwartz, Nacy L. (1982). *Market Structure and Innovation*. New York: Cambridge University Press.

Katz, Elihu and Lazarsfeld, Paul F. (1955). *Personal Influence: The Part Played by People in the Flow of Mass Communications*. New York: The Free Press.

Katz, Michael L. and Shapiro, Carl (1987). "R&D Rivalry with Licensing or Imitation," *The American Economic Review*, vol. 77, no. 3, June, pp. 402-420.

Kearsley, G. *et al*. (1983). "Two Decades of Computer Based Instruction Projects: What Have We Learned?," *Technological Horizons in Education*, vol. 10, no. 3, January, pp. 90-94.

Keiser, Norman F. (1965). *Economics: Analysis and Policy*. New York: John Wiley & Sons, Inc.

Kelley, Albert J., Campanella, Frank B., and McKiernan, John (1971). *Venture Capital: A Guidebook for New Enterprises*. Chestnut Hill, MA: Boston College, School of Management, Management Institute, July.

Kleiman, Glenn M. (1984). *Brave New Schools: How Computers Can Change Education*. Reston, VA: Reston Publishing Company, Inc (Prentice-Hall).

Klier, Betje ed. (1984). *Technology and the Longer View*. *Proceedings of the Annual National Conference on Technology and Education* (1st, Ft. Worth, TX, April 19-20, 1984). Ft. Worth, TX: Tandy Corp., Radio Shack Education Division, April.

Knupfer, Nancy N. (1986). "Change, Implementation, Equity: A Model Design for a Computer Education Plan," *University of Wisconsin-Madison* [Madison, WI].

Kotler, Philip and Dubois, Bernard (1974). "Education Problems and Marketing" in *Marketing Analysis for Societal Problems* (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research.

Kozma, Robert B. (1986). "Present and Future Computer Courseware Authoring Systems," *Educational Technology*, vol. 26, no. 6, June, pp. 39-41.

Kramer-Siri, Diane (1984). "ICT: Educational-Industrial Cooperation in Action," *Technological Horizons in Education*, vol. 12, no. 4, November, pp. 107-08.

Krashinsky, Michael (1986). "Transaction Costs and a Theory of the Nonprofit Organization" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, pp. 113-142.

Kwon, Young K. (1982). "Private versus Public Production of Information," Journal of Economic Behavior & Organization, vol. 3, pp. 345-356.

Ladd, David (1982). "Statement of David Ladd, Register of Copyrights and Assistant Librarian of Congress for Copyright Services" in Copyright/Cable Television (Part 1, Serial No. 44). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, pp. 900-981.

Lambert, Benjamin J. III et al. (1984). Initiatives to Advance Computer-Assisted Instruction. Report of the Joint Subcommittee to the Governor and the General Assembly of Virginia. House Document No. 34. Richmond, VA: Virginia State General Assembly.

Langenscheidt, Florian and Putnam, Constance (1984). "A Publisher's Perspective on Software Development," Unterrichtspraxis, vol. 17, no. 1, Spring, pp. 56-65.

Larson, Gary O. (1983). The Reluctant Patron: The United States Government and the Arts, 1943-1965. Philadelphia: University of Pennsylvania Press.

Lathrop, Ann ed. (1985). The 1986 Educational Software Preview Guide. San Mateo, CA: County Office of Education, State of California, December.

Lauterbach, Roland (1986). "Preparing for Change -- Anticipating New Information Technology in German Primary Education," Programmed Learning and Educational Technology, vol. 23, no. 4, November, pp. 337-45.

Leonard, Janet (1985). Computers in Language and Literacy Work. London (England): Adult Literacy and Basic Skills Unit, Inner London Education Authority, September.

Leonard, Rex and LeCroy, Barbara (1985). "The Instrument of the Future: Computers in Education," University of Southern Mississippi [Mississippi].

Levine, Faye (1976). The Culture Barons. New York: Thomas Y. Crowell Company.

Levin, Henry M. (1985). "Costs and Cost-Effectiveness of Computer-assisted Instruction," Public Budgeting and Finance, vol. 5, no. 1, Spring, pp. 27-42.

Levin, Henry M. and Meister, Gail R. (1985). "Educational Technology and Computers: Promises, Promises, Always Promises," Stanford University, Stanford Education Policy Institute [Menlo Park, CA], November.

Levin, Henry M. (1987). "Education as a Public and Private Good," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer, pp. 628-641.

Levitan, Karen B. (1980). "Needed Research in the Economics of Information Resources," Proceedings of the American Society for Information Science, vol. 17, p. 344.

Lewin, Daniel (1986). "A Vendor's View: Terms of the Marketplace," Change, vol. 18, no. 3, May-June, p. 37.

Lewis, Geoff (1986). "Looking at the Big Picture in the Information Age (Sam Nunn and Frank R. Lautenberg's bill for a 23-member Information Age Commission)," Business Week (Industrial Edition), Oct. 13, p. 158C.

Lewis, R. (1983). "Teachers, Pupils and Microcomputers," Technological Horizons in Education, vol. 10, no. 4, February, pp. 81-87.

Linn, M. C. and Fisher, C. W. (1984). "The Gap between Promise and Reality in Computer Education: Planning a Response" in Making Our Schools More Effective: Proceedings of Three State Conferences. Alexandria, VA: ERIC Document Reproduction Service, June.

Lipkin, John P. (1983). "Equity in Computer Education," Educational Leadership, vol. 41, no. 1, September, p. 26.

Loucks-Horsley, Susan et al. (1985). The Role of Teacher Incentives and Rewards in Implementing a Technological Innovation. Final Report. Cambridge, MA: Bolt, Beranek and Newman, Inc., March.

Machlup, Fritz (1962). The Production and Distribution of Knowledge in the United States. Princeton: Princeton University Press.

Machlup, Fritz (1980). Knowledge: Its Creation, Distribution, and Economic Significance, Volume I, Knowledge and Knowledge Production. Princeton: Princeton University Press.

Machlup, Fritz (1984). Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital. Princeton: Princeton University Press.

Mackaay, Ejan (1982). Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing.

Maddux, Cleborne D. (1984). "Educational Microcomputing: The Need for Research," Computers in the Schools, vol. 1, no. 1, Spring, pp. 35-41.

Maddux, Cleborne D. and Cummings, Rhoda E. (1986). "Educational Computing at the Crossroads: Type I or Type II Uses to Predominate?," Educational Technology, vol. 26, no. 7, July, pp. 34-38.

Magaziner, Ira C., "The Rationale for a U.S. Industrial Policy," Journal of Contemporary Business, vol. 11, no. 1.

Mandelker, C. B. (1985). "The ABCs of Kiddie Software," Venture, vol. 7, no. 2, February, pp. 10-11.

Mansfield, Edwin, Rapoport, John, Romeo, Anthony, Wagner, Samuel, and Beardsley, George (1977). "Social and Private Rates of Return from Industrial Innovations," Quarterly Journal of Economics, vol. 91, May, pp. 221-240.

Mansfield, Edwin (1981). "How Economists See R&D," Harvard Business Review, Nov.-Dec., pp. 98-106.

Market Data Retrieval (1987). Education Mailing Lists and Marketing Guide. Shelton, CN: Market Data Retrieval.

Marshall, David (1984). "Computer Technology in Education: Redefining the Modes of Educational Transmission" in Regional Conference of Commonwealth Council for Educational Administration (5th, New Delhi, India, January 5-7, 1984; keynote address). Alexandria, VA: ERIC Document Reproduction Service, January.

Martorella, Peter H. (1983). "Interactive Video Systems in the Classroom," Social Education, vol. 47, no. 5, May, pp. 25-27.

Masland, Andrew T. (1984). "Academic Computing as Technological Innovation" in Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984). Washington, DC: American Educational Research Association, April.

Mattas, Linda L. (1986). Only the Best: The discriminating Software Guide for Preschool-Grade 12. 1986 Edition. Carmichael, CA: Education News Service (SchoolTechNews).

May, Lee (1984). "Law to Penalize Chip Pirates Signed," The Boston Globe.

Mayer, R., Nicosia, F. M., and Middlebrook, S. (1974). Technological Change, Product Proliferation and Consumer Decision Processess. Volume 4 -- Technology, the Consumer, and Information Flows. Berkeley, CA: University of California, Graduate School of Business Administration, August.

Mayfield, W. A. (1986). "Developing and Managing Technology Partnerships between Industry and Higher Education" in Annual Convention of the American Vocational Association (Dallas, TX, December 1986). Arlington, VA: American Vocational Association.

McCredie, John W. (1982). "Strategies for Campus Computing," Perspectives on Computing, vol. 2, no. 3, October, pp. 4-10.

McCulloch, D. W. (1979). "The Economics of Instruction Software -- Analysis and Implications," *Computers and Education*, vol. 3, no. 4, pp. 293-94.

McDonald, Dennis D. (1983). "Copyright Can Survive the New Technologies," *American Society for Information Science*, August, pp. 19-22.

McDonald, Joseph P. (1985). "Microworlds and Expert Systems: Is it Either or Can it be Both? Report of a Conference Sponsored by the Educational Technology Center (Cambridge, MA, January 11-12, 1985)," *Harvard University, Educational Technology Center* [Cambridge, MA], January.

McGinty, Tony, Reinhold, Fran, eds. (1985). "The Big Sift," *Electronic Learning*, vol. 4, no. 8, May-June, pp. 15-32+.

McKenzie, Floretta Dukes (1985). "Leadership: The Critical Variable" in *Annual Meeting of the Florida Association of School Administrators* (Orlando, FL, June 16, 1985). Orlando: Florida Association of School Administrators, June 16.

McKenzie, John ed. (1978). *Interactive Computer Graphics in Science Teaching*. New York: Halstead Press (John Wiley & Sons).

McMeen, George R. (1986). "The Impact of Technological Change on Education," *Educational Technology*, vol. 26, no. 2, February, pp. 42-45.

Mecklenburger, James A., Blom, Don E., and Williams, Cheryl S. (1987). "Insider's Letter," *National School Boards Assoc., Inst. for the Transfer of Tecnology to Education* [Alexandria, VA], vol. 2, no. 3, June.

Meister, Gail R. and Levin, Henry (1984). "Successful Integration of Microcomputers in an Elementary School," *Stanford University, Center for Educational Research* (IREFG) [Menlo Park, CA], May.

Melmed, Arthur S. (1986). "The Technology of American Education: Problem and Opportunity," *Technological Horizons in Education*, vol. 14, no. 2, September, pp. 77-81.

Merrill, Paul F., Tolman, Marvin N., Christensen, Larry, Hammons, Kathy, Vincent, Bret R., and Reynolds, Peter L. (1986). *Computers in Education*. Englewood Cliffs, NJ: Prentice-Hall.

Meyer-Krahmer, Frieder, Gielow, Gisela, and Kuntze, Uwe (1983). "Impacts of Government Incentives Towards Industrial Innovation: An Analysis of the Federal Programme Funding R&D Personnel in the Federal Republic of Germany," *Research Policy*, vol. 12, pp. 153-169.

Meyerhoff, Howard A. (1966). "Statement of Prof. Howard A. Meyerhoff, Director and President, Committee to Investigate Copyright Problems Affecting Communication in Science and Education" in *Copyright Law Revision* (Part 3, Serial No. 8). Washington, DC: U.S. Congress, House

Committee on the Judiciary, Subcommittee on Courts, pp. 1470-1477.

Micro-Ideas (1985). *Proceedings of the Annual Conference* on "The Role of the Computer in Education" (5th, Arlington Heights, Illinois, February 20-22, 1985). Glenview, IL: Micro-Ideas, February.

Miller, Howard S. (1970). *Dollars for Research: Science and Its Patrons in Nineteenth-Century America*. Seattle: University of Washington Press.

Minter, B. (1985). "Spinnaker Shifts with the Wind," *Venture*, March, p. 24+.

Mitchell, Maurice C., Jr. (1984). "Navigating the Software Maze," *VocEd*, vol. 59, no. 3, April, pp. 25-26.

Moran, B. (1984). "Grolier Eyes Software Market," *Advertising Age*, vol. 55, no. 67, Oct. 8, p. 30.

Moran, B. (1985). "Scholastic Aiming Software at Schools ...," *Advertising Age*, no. 13, Feb. 18, p. 54.

Moursund, David (1984). "The Two Percent Solution -- Funding for Use of Computers," *NASSP Bulletin*, vol. 68, no. 472, May, pp. 49-54.

Moursund, David (1985). *The Computer Coordinator* (Computer coordinator responsibilities and necessary qualifications). Eugene, OR: International Council for Computers in Education.

Moursund, David (1985). *High Tech / High Touch: A Computer Education Leadership Development Workshop. Second Edition*. Eugene, OR: International Council for Computers in Education, September.

Murnane, Richard J. and Nelson, Richard R. (1984). "Production and Innovation When Techniques are Tacit," *Journal of Economic Behavior and Organization*, vol. 5, pp. 353-373.

Murphy, Brian (1984). "Tom Snyder: Interview," *InCider*, vol. 2, no. 6, June, pp. 42-44+.

Murphy, Susanne (1983). "Of Greased Pigs and Moving Targets: Computer Education in the Fast Track," *Journal of Staff Development*, vol. 4, no. 2, November, pp. 35-41.

Myers, Charles A. (1970). *Computers in Knowledge-Based Fields*. Cambridge, MA: MIT Press.

National Commission on Libraries and Information Science (1976). *Evaluation of the Effectiveness of Federal Funding of Public Libraries*. Washington, DC: National Commission on Libraries and Information Science, December.

National Commission on Excellence in Education (1983). A Nation at Risk: The Imperative for Educational Reform. Washington, DC: National Commission on Excellence in Education.

National Governors' Association Center for Policy Research and Analysis (1986). Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis.

National Governors' Association (1987). Results in Education: 1987. The Governors' 1991 Report on Education. Washington, DC: National Governors' Association.

National School Boards Association (1985). New Technologies: Key to More Productive Schools. Alexandria, VA: National School Boards Association.

Neff, Raymond K. (1985). "Merging Libraries and Computer Centers: Manifest Destiny or Manifestly Deranged? An Academic Services Perspective," EDUCOM Bulletin, vol. 20, no. 4, Winter, pp. 8-12.

Neill, Shirley Boes (1984). High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators.

Nelson, Richard R. and Winter, Sidney G. (1977). "In Search of Useful Theory of Innovation," Research Policy, vol. 6, pp. 36-76.

Nelson, Richard R. (1987). "Roles of Government in a Mixed Economy," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer, pp. 541-557.

Neumann, Robert (1982). "How To Find Good Software," ELECTRONIC Learning, vol. 2, no. 2, October, pp. 40-43.

New York State Education Dept., Center for Learning Technologies (1984). Survey of Computer Use, Spring 1983 and Microcomputer Use in New York State Public Schools, Total State, Fall 1984. Albany, NY: New York State Education Dept., Center for Learning Technologies.

Nielsen, Waldemar A. (1972). The Big Foundations. New York: Columbia University Press.

Nora, Simon and Minc, Alain (1980). The Computerization of Society (Introduction by Daniel Bell). Cambridge, MA: MIT Press.

Nordhaus, William D. (1969). Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change. Cambridge, MA: The MIT Press.

Nordhaus, William D. (1985). "Private Discussion with William D. Nordhaus," MIT Center for Policy Alternatives [Cambridge, MA], February 6.

Norris, Cathleen M. and Lumsden, Barry (1984). "Functional Distance in the Attitudes of Educators Towards Computers," Technological Horizons in Education, vol. 11, no. 4, January, pp. 129-32.

Northwest Regional Educational Laboratory (1985). Social Studies. Microsift Courseware Evaluations. Portland, OR: Northwest Regional Educational Laboratory.

Norris, William C. (1985). "Improving Education Through Technological Innovation," Technological Horizons in Education, vol. 12, no. 10, June, pp. 65-68.

O'Neal, Fred (1983). "Waterford School and the WICAT Education Institute: An Alternative Model for CAI and Development Research," CALICO Journal, vol. 1, no. 1, June, pp. 19-23+.

OECD, Centre for Educational Research and Innovation (1984). International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July.

OECD, Center for Research and Innovation in Education (1986). Information Technologies and Basic Learning. International Conference of National Representatives and Experts (Paris, 13th-15th October 1986). Paris: OECD, Center for Research and Innovation in Education, October.

Olds, Henry F. (1985). "The Microcomputer and the Hidden Curriculum," Computers in the Schools, vol. 2, no. 1, Spring, pp. 3-14.

Olson, John and Eaton, Sandra (1986). Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education.

Oregon University, Center for Advanced Technology in Education (1984). The Computer: Extension of the Human Mind III. Proceedings of the Annual Summer Computer Conference (3rd, Eugene, Oregon, August 1-3, 1984). Eugene, OR: Oregon University, Center for Advanced Technology in Education, August.

Owston, Ronald D. and Dudley-Marling, Curt (1986). "A Criterion-Based Approach to Software Evaluation" in Annual Meeting of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, Apr. 17.

Pantiel, Mindy and Peterson, Becky (1985). "Are Your Teachers Ready for Computers?," Principal, vol. 64, no. 4, March, pp. 44-46.

Papert, Seymour A. (1979). "Computers and Learning" in *The Computer Age: A Twenty-Year View* (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, pp. 73-86.

Papert, Seymour (1980). *Mindstorms*. New York: Basic Books.

Papert, Seymour (1986). "New Views on LOGO (Seymour Papert, father of the Logo computer language, talks about his ideas for improving it)," *Electronic Learning*, April, pp. 33-36+.

Park, Chung I. (1984). "Transforming Librarians," *COINT Reports, AD Digest* [Morton Grove, IL], vol. 5, no. 5.

Parker, Walter C. (1984). "Computer -- Master or Tool?," *Principal*, vol. 63, no. 3, January, pp. 49-50.

Pavitt, Keith and Walker, W. (1976). "Government Policies Towards Industrial Innovation: A Review," *Research Policy*, vol. 5, pp. 11-97.

Pavitt, Keith (1976). "Government Policies Towards Innovation: A Review of Empirical Findings," *OMEGA, The International Journal of Management Science*, vol. 4, no. 5, pp. 539-557.

PC Week (1985). "Nipping the Software Buccaneers in the Bud," *PC Week*, vol. 2, no. 3, January 22, p. 23.

Perelman, Lewis J. (1987). *Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March.

Pethig, Rudiger (1983). "On the Production and Distribution of Information," *Zeitschrift fur Nationalokonomie* (Journal of Economics), vol. 43, no. 4, pp. 383-403.

Petrakos, Pamela (1981). "Rushing Toward Courseware," *80 Microcomputing*, no. 16, April, pp. 79-81.

Peyton, David Y. (1981). "The Creation of Information: Property Rights and Subsidies" in *Issues in Information Policy* (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February, pp. 75-85.

Pigou, Arthur C. (1932). *The Economics of Welfare* (4th edition). London: Macmillan.

Ploch, Margie (1986). "Computers in Schools: Can They Make the Grade?," *High Technology*, vol. 6, no. 9, September, pp. 44-50.

Ploman, Edward W. and Hamilton, L. Clark (1980). Copyright: Intellectual Property in the Information Age. London: Routledge & Kegan Paul.

Pogrow, Stanley (1983). Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc.

Pogrow, Stanley (1986). "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis.

Pogue, Thomas F. and Sgontz, L. G. (1978). Government and Economic Choice: An Introduction to Public Finance. Boston: Houghton Mifflin Company.

Porat, Marc Uri (1977). The Information Economy: Definition and Measurement. Washington, DC: U.S. Department of Commerce, Office of Telecommunications.

Priest, W. Curtiss (1972). The Need and Value of Restructuring Human Communication Systems (Doctoral Dissertation). Troy, NY: Rensselaer Polytechnic Institute.

Priest, W. Curtiss and Hill, Christopher T. (1980). Identifying and Assessing Discrete Technological Innovations: An Approach to Output Indicators (Prepared for the National Science Foundation, Division of Science Resource Studies). Lexington, MA: Center for Information Technology and Society, August.

Priest, W. Curtiss (1982). "CPA's Bibliographic Management System: An Illustration of Market Push and Technology Pull," Center for Policy Alternatives, MIT [Cambridge, MA], Spring, p. 9.

Priest, W. Curtiss (1984). "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25.

Priest, W. Curtiss (1984). "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15.

Priest, W. Curtiss and Kahin, Brian (1984). "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5.

Priest, W. Curtiss (1985). The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10.

Priest, W. Curtiss and Whitbeck, Caroline (1986). Alternative Designs for Medical Information Systems -- Consequences for Health and Human Values. Cambridge, MA: MIT Center for Policy Alternatives, September 1.

Rao, K. Nagaraja, Schmitt, Thomas, and Tschoegl, Adrian E. (1981). Organizational Models for the Support of Industrial Innovation: A Review of Institutions in Ten Countries. Cambridge, MA: MIT Certer for Policy Alternatives, January.

Reinhold, Fran and Corkett, Kay (1985). "EL's Fifth Annual Survey of the States: Mandates -- yes, no, maybe, Though the Number of States Requiring Some Form of Computer Education has Jumped, State-level Involvement is Increasingly Taking the Form of Support for District Programs," Electronic Learning, October, pp. 25-31.

Reinhold, Fran (1986). "Electronic Learning's 1986 Annual Survey of the States: Computing in America, Computer Use in Schools has Solid State-level Support and Use is Settling into District Trends," Electronic Learning, October, pp. 26-34.

Reynolds, Carl L. (1986). ""Enriching the Rural School Curriculum through Telecommunications" in Annual Meeting of the National Rural Teacher Education Conference (2nd, Bellingham, WA, October 8-10, 1986)," ERIC Document Reproduction Service [Alexandria, VA], October.

Riccelli, C. (1985). "Broadcasting Software - Computer Users May Take Free Software From Radio," Inc. Magazine, vol. 7, no. 5, May, p. 20.

Rich, Don (1983). "Partnerships Take a New Turn," VocEd, vol. 58, no. 4, May, pp. 32-33.

Ridley, William J. and Hull, Mcallister H. Jr. (1986). Transforming American Education: Reducing the Risk to the Nation. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April.

Roberts, Linda G., Naismith, Nancy Carson, Feurer, Michael, Fulton, Kathleen, Lawrence, James St., Zuckerkandel, Mia, Becker, Henry, and Ha, Peter (1987). Trends and Status of Computers in Schools: Use in Chapter 1 Programs and Use with Limited English Proficient Students. Staff Paper. Washington, DC: U.S. Congress, Office of Technology Assessment, SET Program, March 13.

Robinson, Louis (1983). "The University-Industry Relationship," Perspectives on Computing, vol. 3, no. 1, March, pp. 4-15.

Roblyer, M. D. ed. (1986). Abstract Proceedings of the Florida Instructional Computing Conference (Orlando, Florida, January 21-24, 1986). Tallahassee, FL: Florida State Dept. of Education. Office of Educational Technology, January.

Rogers, Everett M. and Shoemaker, F. Floyd (1971). Communication of Innovations: A Cross-Cultural Approach. London: Collier-MacMillan Publishers.

Rogers, Everett M. et al. (1985). Microcomputers in the Schools: A Case of Decentralized Diffusion. Menlo Park, CA: Stanford University, Calif. Inst. for Communication Research, April.

Rosenberg, Ronald (1987). "IBM Tries Again in School Market," Boston Globe, August 5, p. 71.

Rose-Ackerman, Susan ed. (1986). The Economics of Nonprofit Institutions. New York: Oxford University Press.

Rosenberg, V. (1982). "National Information Policies" in Annual Review of Information Science and Technology. Knowledge Industry Publications, Inc., vol. 17, pp. 3-32.

Rubin, Michael Rogers (1983). Information Economics and Policy in the United States. Littleton, CO: Libraries Unlimited, Inc.

Ryan, William C. ed. (1986). Proceedings of NECC '86, the National Educational Computing Conference (7th, San Diego, California, June 4-6, 1986). Eugene, OR: International Council on Computers in Education, June.

Salomon, Gavriel (1981). Communicaton and Education: Social and Psychological Interactions. Beverly Hills, CA: Sage Publications, Inc.

Samuelson, Paul A. (1973). Economics (Ninth Edition). New York: McGraw-Hill Book Company.

Sandler, Todd M., Loehr, William, and Cauley, Jon T. (1978). The Political Economy of Public Goods and International Cooperation. Denver: University of Denver.

Sappington, David E. M. and Stiglitz, Joseph E. (1987). "Privatization, Information and Incentives," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer, pp. 567-585.

Savitsky, David (1984). "A Publisher's Guidelines for Educational Software Development," Educational Technology, vol. 24, no. 4, April, p. 45.

Scandura, Joseph M. (1983). "An Analysis of the Federal Role in Instructional Technology in the Era of the New Federalism" in Annual Meeting of the American Educational Research Association (Montreal, Canada, April 14, 1983). Washington, DC: American Educational Research Association, April 14.

Schatz, Willie (1984). "The Old School Sell," Datamation, vol. 30, no. 3, March, pp. 158-164.

Schacht, Wendy H. (1986). "Small Business Innovation Development Act: H.R. 4260 Amendments to P.L. 97-219 (Issue Brief)," U.S. Congressional Research Service, Science Policy Research Division [Washington, DC], Dec. 1.

Schacht, Wendy H. (1986). "Stevenson-Wydler Technology Innovation Act: A Federal Effort to Promote Industrial Innovation (Issue Brief)," U.S. Congressional Research Service, Science Policy Research Division [Washington, DC], Dec. 1.

Schacht, Wendy H. (1987). "Industrial Innovation: Debate over Government Policy (Issue Brief)," U.S. Congressional Research Service, Science Policy Research Division [Washington, DC], July 1.

Schacht, Wendy H. (1987). "Trade, Technology, and Competitiveness (Issue Brief)," U.S. Congressional Research Service, Science Policy Research Division [Washington, DC], May 18.

Schacht, Wendy H. (1987). "Technology Transfer: Utilization of Federally Funded Research & Development (Issue Brief)," U.S. Congressional Research Service, Science Policy Research Division [Washington, DC], May 15.

Schotter, A. and Braunstein, Y. M. (1981). "Economic Search - An Experimental-Study," Economic Inquiry, vol. 19, no. 1, pp. 1-25.

Schooler, Douglas K. (1984). "Microcomputer Telecommunication: Bringing Education Online for an Expanded Classroom," ERIC Document Reproduction Service [Alexandria, VA], May 22.

Scitovsky, Tibor (1954). "Two Concepts of External Economics," The Journal of Political Economy, vol. 62, April, pp. 143-151.

Shavelson, Richard J., Winkler, John D., Stasz, Cathleen, Feibel, Werner, Robyn, Abby E., and Shaha, Steven (1984). Teaching Mathematics and Science: Patterns of Microcomputer Use. Santa Monica, CA: Rand Corporation, March.

Sheth, Jagdish N., Wright, Peter L., eds. (1974). Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research.

Signer, Barbara (1983). "How the Literature and a Research Study Agree on CAI Innovation Success and Failure," School Science and Mathematics, vol. 83, no. 4, April, pp. 307-17.

Singer, Neil M. (1972). Public Microeconomics. Boston: Little, Brown and Company.

Slitor, R. E. (1971). "The Tax Treatment of Research and Innovative Investment" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd.

Smith, Bev (1987). "Addison-Wesley Launches Info Literacy Program: Customizes EasyNet for High School Market," *Information Today*, February, pp. 1,39.

Smith, David A., Cunningham, R. Stephen, eds. (1986). "Computer Corner (Databases that cover computer software for college mathematics)," *College Mathematics Journal*, vol. 17, no. 3, May, pp. 255-66.

Smith, Frank (1983). ""The Promise and Threat of Microcomputers for Language Learners" in On TESOL '83. The Question of Control. Annual Convention of Teachers of English to Speakers of Other Languages (Edited by Jean Handscombe, 17th, Toronto, Canada, March 15-20, 1983)," *ERIC Document Reproduction Service* [Alexandria, VA], March.

Sniderman, Ron (undated). *Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report*. Wayne, MI: Wayne County Intermediate School District.

Software Publishers Assocation (1985). *The National Education Association's Educational Computer Service. An Assessment*. Washington, DC: Software Publishers Assocation, feb 6.

Solomon, Richard Jay (1984). "Copyright Chaos," *Professional Publishing*, September, pp. 11-17.

Spann, Milton G., Jr. and Thompson, Cynthia G. (1986). *The National Directory of Exemplary Programs in Developmental Education. Second Edition*. Boone, NC: Appalachian State Univ.; National Center for Developmental Education.

Sprecher, Jerry W. and Chambers, Jack A. (1980). "Computer Assisted Instruction: Factors Affecting Courseware Development," *Journal of Computer-Based Instruction*, vol. 7, no. 2, November, pp. 47-57.

Sprung, J.P. (1983). "The Business of Software Licensing at the University of Waterloo," *Journal of the Society of Research Administrators*, vol. 15, no. 2, Fall, pp. 5-18.

Squire, James R. (1979). "Publishers, Social Pressures, and Textbooks" in *The Textbook in American Society*. Washington, DC: U.S. Library of Congress, pp. 27-30.

State of North Carolina (1978). *Textbook Adoption in North Carolina*. Raleigh, NC: State of North Carolina.

Steier, Lloyd P. (1986). "Computer Technology and Education: A Policy Delphi" in Annual Meetings of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, April 18.

Stigler, G. J. (1971). "The Economics of Information" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd.

Stonier, Tom and Conlin, Cathy (1985). The Three Cs: Children, Computers, and Communication. New York: John Wiley & Sons.

Sturdivant, Patricia (1983). "Houston Researches Computer Supported Immersion Strategy," AEDS Monitor, vol. 21, no. 11, May-June, pp. 25-27.

Sullivan, Edmund V. (1985). "Computers, Culture, and Educational Futures -- A Meditation on 'Mindstorms'," Interchange, vol. 16, no. 3, Fall, pp. 1-18.

Summers, Edward G. (1985). "Microcomputers as a New Technological Innovation in Education: Growth of the Related Journal Literature," Educational Technology, vol. 25, no. 8, August, pp. 5-14.

Swedish National Board for Technical Development (1983). National Microelectronic Program. Stockholm, Sweden: Swedish National Board for Technical Development, no. 424.

Tassey, Gregory (1982). "Infratechnologies and the Role of Government," Technological Forecasting and Social Change, vol. 21, pp. 163-180.

Taylor, Robert (1980). The Computer in the School: Tutor, Tool, Tutee. New York: Teachers College Press.

Terry, Patricia et al. (1986). "Implementation of a District Computerized Instructional Management System: Barriers and Facilitators," Far West Laboratory for Educational Research and Development [San Francisco, CA], April.

Tewksburg, J. G., Crandall, M. S., and Crane, W. E. (1980). "Measuring the Societal Benefits of Innovation," Science, vol. 209, no. 8, August, pp. 658-662.

Texas House of Representatives, House Study Group (1984). The Texas Textbook Controversy. House Study Group Special Legislative Report. Austin, TX: Texas House of Representatives, House Study Group, May 9.

The Federal Minister for Research and Technology (1980). Sixth Report of the Federal Government on Research. Bonn, Germany: The Federal Minister for Research and Technology.

The Value Line Investment Survey (1980). "Publishing Industry (Including Grolier, Harcourt Brace, Houghton Mifflin, Macmillan, McGraw-Hill, Prentice-Hall, SFN Companies)," *The Value Line Investment Survey* [New York], vol. 35, no. 25, March 21, pp. 1777-99.

The Value Line Investment Survey (1987). "Publishing Industry (Including Bell & Howell, Grolier, Harcourt Brace, Houghton Mifflin, Macmillan, McGraw Hill and John Wiley)," *The Value Line Investment Survey* [New York], vol. 42, no. 38, June 12, pp. 1788-811.

Tolman, Marvin N. and Allred, Ruel A. (1984). *The Computer and Education. What Research Says to the Teacher*. West Haven, CT: Natinal Education Association, Professional Library.

Toulmin, H. A., Jr. (1939). *Patents and the Public Interest*. New York: Harper & Brothers Publishers.

Troutner, Joanne (1983). *The Media Specialist, the Microcomputer, and the Curriculum*. Litteton, CO: Libraries Unlimited, Inc.

Truett, Carol (1984). "Field Testing Educational Software: Are Publishers Making the Effort?," *Educational Technology*, vol. 24, no. 5, May, p. 1984.

Truett, Carol and Ho, Curtis (1986). "Is Educational Software Fieldtested?," *Computing Teacher*, vol. 14, no. 2, October, pp. 24-25.

Tucker, Nancy G. (1985). "A Head Start in Computer Technology: How Release Time for Teachers Can Give Students an Advantage," *ERIC Document Reproduction Service* [Alexandria, VA].

Ulmer, Dale (1986). "Interactive Video Changed My Classroom," *Vocational Education Journal*, vol. 61, no. 6, September, pp. 34-36.

U.S. Congress, Committee on Science and Technology (1983). *Computers and Education. Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology. U.S. House of Representatives, Ninety-Eighth Congress, First Session* (September 28, 29, 1983). Washington, DC: U.S. Congress, Committee on Science and Technology.

U.S. Congress, Committee on Ways and Means (1983). *Computer Contribution Act of 1983. Hearing before the Subcommittee on Select Revenue Measures of the Committee on Ways and Means. House of Representatives, Ninety-Eighth Congress, First Session, on H.R. 701* (San Francisco, CA). Washington, DC: U.S. Congress, Committee on Ways and Means, Nov. 11.

U.S. Congress, Committee on Education and Labor, House of Representatives (1984). *Hearing on Computer Education. Hearing before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eigth Congress, Second Session, on H.R. 3750, H.R. 1134, and H.R. 4628*. Washington, DC:

U.S. Congress, Committee on Education and Labor, House of Representatives.

U.S. Congress, House Committee on Education and Labor (1982). *Oversight on Educational Technology. Joint Hearing before the Subcommittee on Select Education of the Committee on Education and Labor. House of Representatives, Ninety-Seventh Congress, Second Session.* Washington, DC: U.S. Congress, House Committee on Education and Labor, Sept. 14.

U.S. Congress, House Committee on Education and Labor (1983). *Hearing on National Centers for Personal Computers in Education. Hearing before the Subcommittee on Elementary, Secondary and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eighth Congress, First Session on H.R. 1134 to Amend Title III of the Elementary and Secondary Education Act of 1965 to Provide for One or More National Centers for Personal Computers in Education.* Washington, DC: U.S. Congress, House Committee on Education and Labor, April 21.

U.S. Congress, House Committee on Science and Technology (1984). *The Computer Literacy Act, H.R. 3750 and the National Educational Software Act, H.R. 4628. Hearing before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, House of Representatives, Ninety-Eighth Congress, Second Session.* Washington, DC: U.S. Congress, House Committee on Science and Technology, no. 107, June 5.

U.S. Congress, House Committee on Education and Labor (1987). *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145.* Washington, DC: U.S. Congress, House Committee on Education and Labor.

U.S. Congress, Library of Congress, Congressional Research Service (1974). *The Congress and Information. Staff Report prepared for the use of the Select Committee on Committees, U.S. House of Representatives by the Science Research Division, Congressional Research Service, Library of Congress.* Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, May 5.

U.S. Congress, Library of Congress, Congressional Research Service (1980). *Information Technology in Education: Perspectives and Potentials. Report prepared for the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, U.S. House of Representatives, Ninety-Sixth Congress, Second Session, Serial QQQ.* Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, December.

U.S. Congress, Library of Congress, Congressional Research Service (1982). *The Information Science and Technology Act of 1981. Report prepared for the Subcommittee on Science, Research and Technology transmitted to the Committee on Science and Technology. U.S. House of Representatives,* Ninety-Seventh Congress, Second Session, Serial DD. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, June.

U.S. Congress, Office of Technology Assessment (1985). Information Technology R&D: Critical Trends and Issues. Washington, DC: U.S. Congress, Office of Technology Assessment, February.

U.S. Congress, Senate Committee on Commerce, Sci (1987). Competitive Challenge Facing U.S. Industry, Hearings before the Committee on Commerce, Science, and Transportation, United State Senate, One Hundredth Congress, First Session, on Competitive Challenge Facing U.S. Industries in the Science, Technological, and Industrial Fields. Washington, DC: U.S. Congress, Senate Committee on Commerce, Sci.

U.S. Congress, Subcommittee on Science, Technology, and Space (1983). Role of Technology in Promoting Industrial Competitiveness. Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-Eight Congress, First Session, on S. 1286, To Establish A Program to Conduct Research and Development for Improved Manufacturing Technologies, and for other Purposes. Washington, DC: U.S. Congress, Subcommittee on Science, Technology, and Space.

U.S. Congress, Senate Subcommittee on Science, Technology, and Space (1985). New Technologies on Economic Competitiveness, Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-ninth Congress, First Session, on Effect of New Technologies on Economic Competitiveness: Technology Transfer. Washington, DC: U.S. Congress, Senate Subcommittee on Science, Technology, and Space.

U.S. Library of Congress Network Advisory Committee (1984). Public/Private Sector Interactions: The Implications for Networking. Washington, DC: U.S. Library of Congress Network Advisory Committee.

U.S. National Commission on New Technological Uses of Copyrighted Works (1979). Final Report of the National Commission on New Technological Uses of Copyrighted Works (CONTU Report). Washington, DC: U.S. National Commission on New Technological Uses of Copyrighted Works.

Utsumi, Seiji (1983). "The Videodisc: Its Possibility as an Educational Media," Journal of Science and Mathematics Education in Southeast Asia, vol. 6, no. 1, July, pp. 41-46.

Utterback, James M. and Abernathy, William J. (1975). "A Dynamic Model of Process and Product Innovation," OMEGA, The International Journal of Management Science, vol. 3, no. 6, pp. 639-656.

Utterback, James M. and Murray, Albert E. (1977). The Influence of Defense Procurement and Sponsorship of Research and Development on the Development of the Civilian Electronics Industry. Cambridge, MA: MIT

Center for Policy Alternatives, June 30.

Valesky, Thomas C. *et al*. (1986). "Evaluating Software: Administrators Need Help, Too," *Technological Horizons in Education*, vol. 14, no. 4, November, pp. 68-71.

Vesper, Karl (1974). *Venture Initiation Courses in U.S. Schools*. Seattle, WA: University of Washington, School of Business Administration, September.

Viner, Jacob (1931). "Cost Curves and Supply Curves," *Zeitschrift fur Nationalokonomie*, vol. 3, pp. 23-46.

Vinken, P. (1982). "Information Economy, Government and Society," *ASLIB Proceedings*, vol. 34, no. 8, pp. 329-349.

Virginia Community College System, Sterling. Inst. for Instructional Excellence (1986). *Catalog of Exemplary Projects, 1985-86*. Sterling, VA: Virginia Community College System, Sterling. Inst. for Instructional Excellence.

Waggoner, Michael D. and Goldberg, Albert L. (1986). "A Forecast for Technology and Education: The Report of A Computer Conferencing Delphi," *Educational Technology*, vol. 26, no. 6, June, pp. 7-14.

Wagner, L. (1982). *The Economics of Educational Media*. New York: St. Martin's Press.

Walker, Decker F. (1983). "Reflections on the Educational Potential and Limitations of Microcomputers," *Phi Delta Kappan*, vol. 65, no. 2, October, pp. 103-07.

Walker, Decker F. (1984). "Computers in Schools. I: Potential & Limitations. II: The Software Problem. Educational Brief," *Far West Lab. for Educational Research and Development* [San Francisco, CA], February.

Watjen, L. Russel (1985). "Software Development in Higher Education," *Journal of Career Development*, vol. 12, no. 2, December, pp. 171-75.

Watt, Dan (1983). "Educational Computing: The Wired Classroom," *Popular Computing*, vol. 2, no. 8, June, p. 70+.

Watt, Dan (1983). "Games Designed for Learning," *Popular Computing*, vol. 2, no. 9, July, pp. 65-67.

Weaver, Dave and Holznagel, Don (1984). "An Analysis of Available Courseware," *Northwest Regional Educational Laboratory* [Portland, OR], April.

Wedman, John F. (1986). "Educational Computing Inservice Design: Implications from Teacher' Concerns Research" in Annual Convention of the Association for Educational Communications and Technology (Las Vegas, NV, January 16-21, 1986). Washington, DC: Association for Educational Communications and Technology (AECT), January.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al. (1981). Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment.

Welker, James D. (1985). "CAI PDQ," Science Teacher, vol. 52, no. 4, April, pp. 47-49.

White, Mary Alice (1984). "The Electronic Learning Revolution: Questions We Should Be Asking," Quarterly Review of Education, vol. 14, no. 1, Spring, pp. 23-33.

White, Mary Alice (1985). "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21.

White, Mary Alice (1985). "First Reply: For a Less Narrow Conception of Learning," Prospects: Quarterly Review of Education, vol. 15, no. 4, Winter, pp. 513-14.

Williamson, John H. (1979). "Textbook Publishing: Facts and Myths" in The Textbook in American Society. Washington, DC: U.S. Library of Congress, pp. 38-40.

Wilson, Andrew H. (1973). Governments and Innovation. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April.

Winkler, John D. et al. (1986). Administrative Policies for Increasing the Use of Microcomputers in Instruction. Santa Monica, CA: Rand Corporation, July.

Woodworth, Robert T., Durkee, Peter H., Delano, Myles S., and Chambers, Edward J. (1970). The Entrepreneurial Process: The Roles of Accountants, Bankers and Lawyers. Seattle, WA: University of Washington, December.

Yeloushan, Kathleen (1986). Yes, Computers in the Classroom. Columbus, OH: Annual Computer Fair (5th, Columbus, OH, February 25, 1986).

Young, Dennis R. (1986). "Entrepreneurship and the Behavior of Nonprofit Organizations: Elements of a Theory" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, pp. 161-184.

Young, Sandy (1984). "The Big Step into Technology: Advice for the Cautious/Reluctant School Administrator," NASSP Bulletin, vol. 68, no. 472, May, pp. 43-48.

Zakariya, Sally Banks (1984). "Your Computers Just Cost You a Bundle; Now Try These Nifty Ways to Use Them," American School Board Journal, vol. 171, no. 3, March, pp. 37-38.

Zaltman, Gerald (1974). "Strategies for Diffusing Innovations" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research.

Zientara, Marguerite (1984). "Social Issues: Sharing the Wealth," InfoWorld, vol. 6, no. 36, Sept. 3, pp. 28-32.

Zucker, Andrew (1982). "Computers in Education: National Policy in the USA," European Journal of Education, vol. 17, no. 4, pp. 395-410.

Zukowski, Angela Ann (1986). "Vision or Fear? Teacher Response to Educational Technology," Momentum, vol. 17, no. 1, February, pp. 13-16.

Selected References on
Administrator

Brink, Dan, "MLJ Computer Corner (Software piracy problems)," *Modern Language Journal*, vol. 70, no. 3, Autumn 1986, pp. 278-82.

Carl, David L. and Hoelscher, Sheila, "Administrators' Perceptions of Computer Usage in Education" in *Annual Meeting of the Assocation of Educational Communications and Technology* (Dallas, TX, January 20-24, 1984). Washington, DC: Association for Educational Communications and Technology, Jan. 20, 1984.

Carnine, Doug *et al.*, *The Role of Technology in School Improvement. A Presenter's Guide. Research Based Training for School Administrators*. Eugene, OR: Oregon University, Center for Educational Policy and Management, 1984.

Collins, Sue, *Computer Technology in Curriculum and Instruction Handbook: Resources* (Washington Office of the State Superintendent of Public Instruction, Olympia). Alexandria, VA: ERIC Document Reproduction Service, December 1983.

Crist-Whitzel, Janet L. *et al.*, "Patterns of Implementing a District Computerized Instructional Management System," *Far West Lab. for Educational Research and Development* [San Francisco, CA], April 1986.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Fahy, Patrick J., "Instructor Attitudes Affecting Adoption of Instructional Innovations," *AEDS Journal*, vol. 19, no. 1, Fall 1985, pp. 66-79.

Glatthorn, Allan A., *Curriculum Renewal* (Manual for educators to use in curriculum planning and development). Alexandria, VA: Association for Supervision and Curriculum Development, 1987.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," *European Journal of Education*, vol. 17, no. 4, 1982, pp. 339-53.

Isherwood, Geoffrey B., "The Principal and the Pauper: Administrator Training in Computer Technology," *Education Canada*, vol. 25, no. 4, Winter 1985, pp. 4-9.

Jorde, Paula, "Computer Technology in the Educational Setting: The Role of Administrators in the Innovation Decision Process" in World Assembly of the International Council on Education for Teaching (32nd, Vancouver, British Columbia, Canada, July 22-26, 1985). Washington, DC: International Council on Education for Teaching, July 1985.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," Harvard University, Educational Technology Center [Cambridge, MA], Feb. 6, 1984.

McKenzie, Floretta Dukes, "Leadership: The Critical Variable" in Annual Meeting of the Florida Association of School Administrators (Orlando, FL, June 16, 1985). Orlando: Florida Association of School Administrators, June 16, 1985.

Moursund, David, High Tech / High Touch: A Computer Education Leadership Development Workshop. Second Edition. Eugene, OR: International Council for Computers in Education, September 1985.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Norris, Cathleen M. and Lumsden, Barry, "Functional Distance in the Attitudes of Educators Towards Computers," Technological Horizons in Education, vol. 11, no. 4, January 1984, pp. 129-32.

Parker, Walter C., "Computer -- Master or Tool?," Principal, vol. 63, no. 3, January 1984, pp. 49-50.

Reinhold, Fran and Corkett, Kay, "EL's Fifth Annual Survey of the States: Mandates -- yes, no, maybe, Though the Number of States Requiring Some Form of Computer Education has Jumped, State-level Involvement is Increasingly Taking the Form of Support for District Programs," Electronic Learning, October 1985, pp. 25-31.

Reinhold, Fran, "Electronic Learning's 1986 Annual Survey of the States: Computing in America, Computer Use in Schools has Solid State-level Support and Use is Settling into District Trends," Electronic Learning, October 1986, pp. 26-34.

Terry, Patricia et al., "Implementation of a District Computerized Instructional Management System: Barriers and Facilitators," Far West Laboratory for Educational Research and Development [San Francisco, CA], April 1986.

Valesky, Thomas C. et al., "Evaluating Software: Administrators Need Help, Too," Technological Horizons in Education, vol. 14, no. 4, November 1986, pp. 68-71.

Winkler, John D. et al., Administrative Policies for Increasing the Use of Microcomputers in Instruction. Santa Monica, CA: Rand Corporation, July 1986.

Young, Sandy, "The Big Step into Technology: Advice for the Cautious/Reluctant School Administrator," NASSP Bulletin, vol. 68, no. 472, May 1984, pp. 43-48.

Selected References on

Appropriability

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Baumgarten, Jon A., "Will Copyright Survive the New Technologies," American Society for Information Science Bulletin, August 1983, pp. 20-22.

Ben-Ner, Avner, "Nonprofit Organizations: Why Do They Exist in Market Economies" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 94-113.

Berman, Jason S., "A Threat to the Recorded-music Industry," Boston Globe, August 14, 1987, p. 15.

Besen, Stanley M., Manning, Willard G., Jr., and Mitchell, Bridger M., "Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem," The Journal of Law & Economics, vol. 21, no. 1, April 1978, pp. 67-95.

Besen, Stanley M., The Effect of Reproduction Technology on Intellectual Property. Cambridge, MA: MIT Research Program on Communications Policy, March 22, 1984.

Boulding, Kenneth E., "The Economics of Knowledge and the Knowledge of Economics" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Brink, Dan, "MLJ Computer Corner (Software piracy problems)," Modern Language Journal, vol. 70, no. 3, Autumn 1986, pp. 278-82.

Cleveland, Harlan, "Information as a Resource," The Futurist, December 1982, pp. 34-39.

Diem, Richard A., "Social Implications of Technological Innovations: A Study of Ethics and Attitudes" in Annual Meeting of the National Council for the Social Studies (64th, Washington, DC, November 15-19, 1984). Washington, DC: National Council for Social Studies, November 1984.

Electronic Learning, "ICCE Publishes Statement on Software Copyright Violations," Electronic Learning, vol. 3, no. 2, October 1983, p. 22.

Ferris, Charles D., "Digital Recorders: An Audio Leap Ahead," Boston Globe, August 14, 1987, p. 15.

Frazier, Donald, "Piracy Study: 50% of Software Copied Illegally," PC Week, vol. 2, no. 3, January 22, 1985, p. 1+.

Gelfond, Susan, "A Bill That Separates Software Renters From Pirates (Computer Software Rental Act of 1987 supported by SPA and Rep. Patricia Schroeder)," Business Week (Industrial Edition), May 11, 1987, p. 136C.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gordon, Wendy J., "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," Columbia Law Review, vol. 82, 1982, pp. 1600-1657.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Helm, Virginia, Software Quality and Copyright: Issues in Computer-Assisted Instruction. Washington, DC: Association for Educational Communications and Technology, 1984.

Helm, Virginia M., "Copyright Issues in Computer-Assisted Instruction" in School Law Update 1985 (Edited by Thomas N. Jones and Darel P. Semler). Topeka, KS: National Organization on Legal Problems in Education, 1985.

International Council for Computers in Education, ICCE Policy Statement on Network and Multiple Machine Software. Eugene, OR: International Council for Computers in Education, 1985.

Jobe, Holly, "Are You Breaking Software Laws?," American School and University, vol. 57, no. 10, June 1985, pp. 13,16.

Kahin, Brian, "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ], 1986.

Kamien, Morton I. and Schwartz, Nacy L., Market Structure and Innovation. New York: Cambridge University Press, 1982.

Krashinsky, Michael, "Transaction Costs and a Theory of the Nonprofit Organization" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 113-142.

Lewis, Geoff, "Looking at the Big Picture in the Information Age (Sam Nunn and Frank R. Lautenberg's bill for a 23-member Information Age Commission)," Business Week (Industrial Edition), Oct. 13, 1986, p. 158C.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital. Princeton: Princeton University Press, 1984.

Mansfield, Edwin, Rapoport, John, Romeo, Anthony, Wagner, Samuel, and Beardsley, George, "Social and Private Rates of Return from Industrial Innovations," Quarterly Journal of Economics, vol. 91, May 1977, pp.

221-240.

May, Lee, "Law to Penalize Chip Pirates Signed," The Boston Globe, 1984.

McDonald, Dennis D., "Copyright Can Survive the New Technologies," American Society for Information Science, August 1983, pp. 19-22.

Meyerhoff, Howard A., "Statement of Prof. Howard A. Meyerhoff, Director and President, Committee to Investigate Copyright Problems Affecting Communication in Science and Education" in Copyright Law Revision (Part 3, Serial No. 8). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, 1966, pp. 1470-1477.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Nordhaus, William D., Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change. Cambridge, MA: The MIT Press, 1969.

PC Week, "Nipping the Software Buccaneers in the Bud," PC Week, vol. 2, no. 3, January 22, 1985, p. 23.

Peyton, David Y., "The Creation of Information: Property Rights and Subsidies" in Issues in Information Policy (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 75-85.

Ploman, Edward W. and Hamilton, L. Clark, Copyright: Intellectual Property in the Information Age. London: Routledge & Kegan Paul, 1980.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Priest, W. Curtiss, The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and

Society, Feb. 10, 1985.

Riccelli, C., "Broadcasting Software - Computer Users May Take Free Software From Radio," Inc. Magazine, vol. 7, no. 5, May 1985, p. 20.

Solomon, Richard Jay, "Copyright Chaos," Professional Publishing, September 1984, pp. 11-17.

Sprung, J.P., "The Business of Software Licensing at the University of Waterloo," Journal of the Society of Research Administrators, vol. 15, no. 2, Fall 1983, pp. 5-18.

Toulmin, H. A., Jr., Patents and the Public Interest. New York: Harper & Brothers Publishers, 1939.

U.S. National Commission on New Technological Uses of Copyrighted Works, Final Report of the National Commission on New Technological Uses of Copyrighted Works (CONTU Report). Washington, DC: U.S. National Commission on New Technological Uses of Copyrighted Works, 1979.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al., Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Selected References on

Attitude

Cahn, Dudley D., "Information Technology and Interpersonal Behavior: Impact on Supervisor-Subordinate and Teacher-Student Relationships" in *Annual Meeting of the Eastern Communication Association* (76th, Providence, RI, May 2-5, 1985). Alexandria, VA: ERIC Document Reproduction Service, May 1985.

Carl, David L. and Hoelscher, Sheila, "Administrators' Perceptions of Computer Usage in Education" in *Annual Meeting of the Assocation of Educational Communications and Technology* (Dallas, TX, January 20-24, 1984). Washington, DC: Association for Educational Communications and Technology, Jan. 20, 1984.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Diem, Richard A., "Social Implications of Technological Innovations: A Study of Ethics and Attitudes" in *Annual Meeting of the National Council for the Social Studies* (64th, Washington, DC, November 15-19, 1984). Washington, DC: National Council for Social Studies, November 1984.

Greenfield, Patricia Marks, *Mind and Media: The Effects of Television, Video Games, and Computers*. Cambridge, MA: Harvard University Press, 1984.

Heuston, Dustin H., *An English Teacher's Conversion to Technology*. Orem, UT: WICAT Systems, Inc., undated.

Heuston, Dustin H., *The Future of Education: A Time of Hope and New Delivery Systems*. Orem, UT: WICAT, Inc., 1986.

Jones, H. Ralph, *Constraints to the Development and Marketing of Medical Electronic Equipment*. Ann Arbor: University of Michigan, Institute of Science and Technology, 1969.

Jorde, Paula, "Computer Technology in the Educational Setting: The Role of Administrators in the Innovation Decision Process" in *World Assembly of the International Council on Education for Teaching* (32nd, Vancouver, British Columbia, Canada, July 22-26, 1985). Washington, DC: International Council on Education for Teaching, July 1985.

Loucks-Horsley, Susan *et al.*, *The Role of Teacher Incentives and Rewards in Implementing a Technological Innovation. Final Report*. Cambridge, MA: Bolt, Beranek and Newman, Inc., March 1985.

Marshall, David, "Computer Technology in Education: Redefining the Modes of Educational Transmission" in *Regional Conference of Commonwealth Council for Educational Administration* (5th, New Delhi, India, January 5-7, 1984; keynote address). Alexandria, VA: ERIC Document Reproduction Service, January 1984.

Masland, Andrew T., "Academic Computing as Technological Innovation" in *Annual Meeting of the American Educational Research Association* (New Orleans, LA, April 23-27, 1984). Washington, DC: American Educational Research Association, April 1984.

Norris, Cathleen M. and Lumsden, Barry, "Functional Distance in the Attitudes of Educators Towards Computers," *Technological Horizons in Education*, vol. 11, no. 4, January 1984, pp. 129-32.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Rogers, Everett M. and Shoemaker, F. Floyd, *Communication of Innovations: A Cross-Cultural Approach*. London: Collier-MacMillan Publishers, 1971.

Rogers, Everett M. *et al*., *Microcomputers in the Schools: A Case of Decentralized Diffusion*. Menlo Park, CA: Stanford University, Calif. Inst. for Communication Research, April 1985.

Shavelson, Richard J., Winkler, John D., Stasz, Cathleen, Feibel, Werner, Robyn, Abby E., and Shaha, Steven, *Teaching Mathematics and Science: Patterns of Microcomputer Use*. Santa Monica, CA: Rand Corporation, March 1984.

Terry, Patricia *et al*., "Implementation of a District Computerized Instructional Management System: Barriers and Facilitators," *Far West Laboratory for Educational Research and Development* [San Francisco, CA], April 1986.

Wedman, John F., "Educational Computing Inservice Design: Implications from Teacher' Concerns Research" in *Annual Convention of the Association for Educational Communications and Technology* (Las Vegas, NV, January 16-21, 1986). Washington, DC: Association for Educational Communications and Technology (AECT), January 1986.

Zaltman, Gerald, "Strategies for Diffusing Innovations" in *Marketing Analysis for Societal Problems* (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Selected References on Case Study

Abernathy, William J. and Utterback, James M., "Innovation and the Evolution of Technology in the Firm," *Harvard University, Harvard Business School* [Cambridge, MA], June 1976.

Crist-Whitzel, Janet L. *et al*., "Patterns of Implementing a District Computerized Instructional Management System," *Far West Lab. for Educational Research and Development* [San Francisco, CA], April 1986.

Estes, Nolan and Klier, Betje, "An International Study of the Impact of New Information Technologies on Curriculum and Institutional Structures" in *Annual Meeting of the American Educational Research Association* (Chicago, IL, March 31-April 4, 1985). Washington, DC: American Educational Research Association, 1985.

Goldhor, Richard S. and Lund, Robert T., *University-to Industry Technology Transfer: A Case Study in Advanced Technology*. Cambridge, MA: MIT Center for Policy Alternatives, November 1981.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, *et al*., *Government Policy, Technological Innovation, and Alternative Energy*. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Kearsley, G. *et al*., "Two Decades of Computer Based Instruction Projects: What Have We Learned?," *Technological Horizons in Education*, vol. 10, no. 3, January 1983, pp. 90-94.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," *Stanford University, Stanford Education Policy Institute* [Menlo Park, CA], November 1985.

Martorella, Peter H., "Interactive Video Systems in the Classroom," *Social Education*, vol. 47, no. 5, May 1983, pp. 25-27.

McCredie, John W., "Strategies for Campus Computing," *Perspectives on Computing*, vol. 2, no. 3, October 1982, pp. 4-10.

Meister, Gail R. and Levin, Henry, "Successful Integration of Microcomputers in an Elementary School," *Stanford University, Center for Educational Research* (IREFG) [Menlo Park, CA], May 1984.

Meyer-Krahmer, Frieder, Gielow, Gisela, and Kuntze, Uwe, "Impacts of Government Incentives Towards Industrial Innovation: An Analysis of the Federal Programme Funding R&D Personnel in the Federal Republic of Germany," *Research Policy*, vol. 12, 1983, pp. 153-169.

Rogers, Everett M. *et al*., *Microcomputers in the Schools: A Case of Decentralized Diffusion*. Menlo Park, CA: Stanford University, Calif. Inst. for Communication Research, April 1985.

Selected References on

Computer As Tool

Black, P., "Tink Tonks for High-Tech Tots," Venture, March 1985, p. 92+.

Craighead, Donna, Bitter, Gary G., eds. , The Best of the Proceedings 1982-1984: Microcomputers in Education Conference. Rockville, MD: Computer Science Press, 1984.

Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp., "A Network for Teacher Support -- Report of the Commissioner's Task Force on Instructional Computing," Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp. [Tallahassee, FL], Feb. 10, 1986.

Kleiman, Glenn M., Brave New Schools: How Computers Can Change Education. Reston, VA: Reston Publishing Company, Inc (Prentice-Hall), 1984.

Merrill, Paul F., Tolman, Marvin N., Christensen, Larry, Hammons, Kathy, Vincent, Bret R., and Reynolds, Peter L., Computers in Education. Englewood Cliffs, NJ: Prentice-Hall, 1986.

Olson, John and Eaton, Sandra, Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education, 1986.

Papert, Seymour A., "Computers and Learning" in The Computer Age: A Twenty-Year View (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, 1979, pp. 73-86.

Papert, Seymour, Mindstorms. New York: Basic Books, 1980.

Papert, Seymour, "New Views on LOGO (Seymour Papert, father of the Logo computer language, talks about his ideas for improving it)," Electronic Learning, April 1986, pp. 33-36+.

Taylor, Robert, The Computer in the School: Tutor, Tool, Tutee. New York: Teachers College Press, 1980.

Troutner, Joanne, The Media Specialist, the Microcomputer, and the Curriculum. Litteton, CO: Libraries Unlimited, Inc., 1983.

Selected References on

Computer Authoring

Association for the Development of Computer-based Instructional Systems, ADCIS Conference Proceedings (27th, New Orleans, Louisiana, February 3-6, 1986). Bellingham, WA: Association for the Development of Computer-based Instructional Systems, February 1986.

Burger, Michael L., "Authoring Languages/Systems Comparisons," AEDS Journal, vol. 19, no. 2, Win-Spr 1986, pp. 190-209.

Craighead, Donna, Bitter, Gary G., eds. , The Best of the Proceedings 1982-1984: Microcomputers in Education Conference. Rockville, MD: Computer Science Press, 1984.

Gillingham, Mark, Murphy, Patricia, Cresci, Kay, Klevenow, Spencer, Sims-Tucker, Bernite, Slade, Debbie, and Wizer, David, "An Evaluation of Computer Courseware Authoring Tools and a Corresponding Assessment Instrument for Use by Instructors," Educational Technology, vol. 26, no. 9, September 1986, pp. 7-12.

Kearsley, G. et al., "Two Decades of Computer Based Instruction Projects: What Have We Learned?," Technological Horizons in Education, vol. 10, no. 3, January 1983, pp. 90-94.

Kozma, Robert B., "Present and Future Computer Courseware Authoring Systems," Educational Technology, vol. 26, no. 6, June 1986, pp. 39-41.

Leonard, Janet, Computers in Language and Literacy Work. London (England): Adult Literacy and Basic Skills Unit, Inner London Education Authority, September 1985.

Merrill, Paul F., Tolman, Marvin N., Christensen, Larry, Hammons, Kathy, Vincent, Bret R., and Reynolds, Peter L., Computers in Education. Englewood Cliffs, NJ: Prentice-Hall, 1986.

Welker, James D., "CAI PDQ," Science Teacher, vol. 52, no. 4, April 1985, pp. 47-49.

Selected References on

Computer Literacy

Christie, Betti J. and Dolan, Dan, "Montana's Task Force on Computer Education," Technological Horizons in Education, vol. 10, no. 2, November 1982, pp. 91-92.

Classroom Computer News, "Pennsylvania: Improving Schools through Technology," Classroom Computer News, vol. 3, no. 5, April 1983, p. 25.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Lambert, Benjamin J. III et al., Initiatives to Advance Computer-Assisted Instruction. Report of the Joint Subcommittee to the Governor and the General Assembly of Virginia. House Document No. 34. Richmond, VA: Virginia State General Assembly, 1984.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Olson, John and Eaton, Sandra, Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education, 1986.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Rogers, Everett M. et al., Microcomputers in the Schools: A Case of Decentralized Diffusion. Menlo Park, CA: Stanford University, Calif. Inst. for Communication Research, April 1985.

Sturdivant, Patricia, "Houston Researches Computer Supported Immersion Strategy," AEDS Monitor, vol. 21, no. 11, May-June 1983, pp. 25-27.

Troutner, Joanne, The Media Specialist, the Microcomputer, and the Curriculum. Litteton, CO: Libraries Unlimited, Inc., 1983.

U.S. Congress, Committee on Science and Technology, Computers and Education. Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology. U.S. House of

Representatives, Ninety-Eighth Congress, First Session (September 28, 29, 1983). Washington, DC: U.S. Congress, Committee on Science and Technology, 1983.

Selected References on

Copyright

Baumgarten, Jon A., "Will Copyright Survive the New Technologies," American Society for Information Science Bulletin, August 1983, pp. 20-22.

Besen, Stanley M., Manning, Willard G., Jr., and Mitchell, Bridger M., "Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem," The Journal of Law & Economics, vol. 21, no. 1, April 1978, pp. 67-95.

Besen, Stanley M., The Effect of Reproduction Technology on Intellectual Property. Cambridge, MA: MIT Research Program on Communications Policy, March 22, 1984.

Brink, Dan, "MLJ Computer Corner (Software piracy problems)," Modern Language Journal, vol. 70, no. 3, Autumn 1986, pp. 278-82.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Dertouzos, James N. and Wildman, Steven S., "A Study of Economic Issues in the Recording Industry" in Copyright Issues: Cable Television and Performance Rights (Serial No. 28). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, August 1981, pp. 699-778.

Diem, Richard A., "Social Implications of Technological Innovations: A Study of Ethics and Attitudes" in Annual Meeting of the National Council for the Social Studies (64th, Washington, DC, November 15-19, 1984). Washington, DC: National Council for Social Studies, November 1984.

Electronic Learning, "ICCE Publishes Statement on Software Copyright Violations," Electronic Learning, vol. 3, no. 2, October 1983, p. 22.

Frazier, Donald, "Piracy Study: 50% of Software Copied Illegally," PC Week, vol. 2, no. 3, January 22, 1985, p. 1+.

Gelfond, Susan, "A Bill That Separates Software Renters From Pirates (Computer Software Rental Act of 1987 supported by SPA and Rep. Patricia Schroeder)," Business Week (Industrial Edition), May 11, 1987, p. 136C.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Helm, Virginia, Software Quality and Copyright: Issues in Computer-Assisted Instruction. Washington, DC: Association for Educational Communications and Technology, 1984.

Helm, Virginia M., "Copyright Issues in Computer-Assisted Instruction" in School Law Update 1985 (Edited by Thomas N. Jones and Darel P. Semler). Topeka, KS: National Organization on Legal Problems in Education, 1985.

Hollomon, J. Herbert, Heaton, George R., et al., Government Involvement in the Innovation Process: Policy Implications (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

International Council for Computers in Education, ICCE Policy Statement on Network and Multiple Machine Software. Eugene, OR: International Council for Computers in Education, 1985.

Jobe, Holly, "Are You Breaking Software Laws?," American School and University, vol. 57, no. 10, June 1985, pp. 13,16.

Kahin, Brian, "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ], 1986.

Ladd, David, "Statement of David Ladd, Register of Copyrights and Assistant Librarian of Congress for Copyright Services" in Copyright/Cable Television (Part 1, Serial No. 44). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, 1982, pp. 900-981.

Lewis, Geoff, "Looking at the Big Picture in the Information Age (Sam Nunn and Frank R. Lautenberg's bill for a 23-member Information Age Commission)," Business Week (Industrial Edition), Oct. 13, 1986, p. 158C.

McDonald, Dennis D., "Copyright Can Survive the New Technologies," American Society for Information Science, August 1983, pp. 19-22.

Meyerhoff, Howard A., "Statement of Prof. Howard A. Meyerhoff, Director and President, Committee to Investigate Copyright Problems Affecting Communication in Science and Education" in Copyright Law Revision (Part 3, Serial No. 8). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, 1966, pp. 1470-1477.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

PC Week, "Nipping the Software Buccaneers in the Bud," PC Week, vol. 2, no. 3, January 22, 1985, p. 23.

Peyton, David Y., "The Creation of Information: Property Rights and Subsidies" in Issues in Information Policy (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 75-85.

Ploman, Edward W. and Hamilton, L. Clark, Copyright: Intellectual Property in the Information Age. London: Routledge & Kegan Paul, 1980.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Riccelli, C., "Broadcasting Software - Computer Users May Take Free Software From Radio," *Inc. Magazine*, vol. 7, no. 5, May 1985, p. 20.

Solomon, Richard Jay, "Copyright Chaos," *Professional Publishing*, September 1984, pp. 11-17.

Sprung, J.P., "The Business of Software Licensing at the University of Waterloo," *Journal of the Society of Research Administrators*, vol. 15, no. 2, Fall 1983, pp. 5-18.

U.S. National Commission on New Technological Uses of Copyrighted Works, *Final Report of the National Commission on New Technological Uses of Copyrighted Works* (CONTU Report). Washington, DC: U.S. National Commission on New Technological Uses of Copyrighted Works, 1979.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., *et al.*, *Informational Technology and Its Impact on American Education*. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Selected References on

Critique

Bok, Derek, "Looking into Education's High-Tech Future," EDUCOM Bulletin, vol. 20, no. 3, Fall 1985, pp. 2-10.

Bowler, Mike, "Textbook Publishers Try to Please All, But First They Woo the Heart of Texas," The Reading Teacher, vol. 31, no. 5, February 1978, pp. 515-518.

Braden, Roberts A., "Instructional Design: Technology at Risk (Commentary on the National Task Force on Educational Technology)," Educational Technology, vol. 26, no. 10, October 1986, pp. 33-34.

Dertouzos, Michael L., Moses, Joel, eds. , The Computer Age: A Twenty-Year View. Cambridge, MA: MIT Press, 1979.

Gillespie, Junetta, "Striking the "R": Demythologizing the 'Computer Revolution'," NALLD Journal, vol. 17, no. 3, Spr-Sum 1983, pp. 4-12.

Hurly, Paul and Hlynka, Denis, "Prisoners of the Cave: Can Instructional Technology Improve Education?," Computers and Education, vol. 8, no. 4, 1984, pp. 427-34.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Software Publishers Assocation, The National Education Association's Educational Computer Service. An Assessment. Washington, DC: Software Publishers Assocation, feb 6, 1985.

Sullivan, Edmund V., "Computers, Culture, and Educational Futures -- A Meditation on 'Mindstorms'," Interchange, vol. 16, no. 3, Fall 1985, pp. 1-18.

Walker, Decker F., "Reflections on the Educational Potential and Limitations of Microcomputers," Phi Delta Kappan, vol. 65, no. 2, October 1983, pp. 103-07.

Selected References on

Curriculum

Arons, Stephen, Compelling Belief: The Culture of American Schooling. Amerhest, MA: The University of Massachusetts Press, 1986.

Batey, Anne, "Integrating Microcomputers into Science Education. Computer Technology Program Reports to Decision Makers.," Northwest Regional Educational Laboratory [Portland, OR], no. 6, November 1985.

Becker, Henry Jay, "Instructional Uses of School Computers: Reports from the 1985 National Survey," The Johns Hopkins University, Center for Social Organization of Schools [Baltimore, MD], no. 4, June 1987.

Bonja, Robert P. and Rogers, Robert J., ""Evolution of Curriculum . . . Before, Into, and Beyond Computer Literacy" in Annual Meeting of the National Council of States on Inservice Education (9th, Orlando, Fl, November 16-20, 1984)," ERIC Document Reproduction Service [Alexandria, VA], Nov. 16, 1984.

Bork, Alfred, Learning with Computers. Bedford, MA: Digital Press, 1981.

Bowler, Mike, "Textbook Publishers Try to Please All, But First They Woo the Heart of Texas," The Reading Teacher, vol. 31, no. 5, February 1978, pp. 515-518.

Brodinsky, Ben, Improving Math & Science Education: Problems & Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1985.

Collins, Sue, Computer Technology in Curriculum and Instruction Handbook: Resources (Washington Office of the State Superintendent of Public Instruction, Olympia). Alexandria, VA: ERIC Document Reproduction Service, December 1983.

Craighead, Donna, Bitter, Gary G., eds. , The Best of the Proceedings 1982-1984: Microcomputers in Education Conference. Rockville, MD: Computer Science Press, 1984.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Dede, Christopher J., Zodhiates, Philip P., and Thompson, Charles L., Intelligent Computer-Assisted Instruction: A Review and Assessment of ICAI Research and Its Potential for Education. Newton, MA: Education Development Center, May 1985.

Fantini, Mario D. and Cadwallader, Lynn J., "Issues in Education. An Examination," *University of Massachusetts, School of Education* [Amherst, MA], 1983.

Fullan, Michael, "Change Processes and Strategies at the Local Level" in *National Institute of Education Conference on State and Local Policy Implications of Effective School Research*. Washington, DC: Dingle Associates, Inc., June 1983.

Glatthorn, Allan A., *Curriculum Renewal* (Manual for educators to use in curriculum planning and development). Alexandria, VA: Association for Supervision and Curriculum Development, 1987.

Goldstein, Paul, *Schooling, Technology, and Law*. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gusse, David R. and Lancaster, Kent M., "Using On-Line Services Makes Course More Realistic," *Journalism Educator*, vol. 38, no. 3, Autumn 1983, pp. 6-10.

Hershey, Jacqueline A., "How Schools Sabotage a Creative Work Force: The Meaningless Repetition that is found even in Award-winning Schools is Driving Children away from Math and the Sciences. America Can't Afford that.," *Business Week* (Industrial Edition), July 13, 1987, p. 16.

Heuston, Dustin H., "Some of the Critical Issues in Introducing Computer Technology into Schools," *WICAT, Inc*. [Orem, UT], January 1985.

Heuston, Dustin H., *The Future of Education: A Time of Hope and New Delivery Systems*. Orem, UT: WICAT, Inc., 1986.

Judd, Wallace, "A Teacher's Place in the Computer Curriculum," *Phi Delta Kappan*, vol. 65, no. 2, October 1983, pp. 120-22.

Kleiman, Glenn M., *Brave New Schools: How Computers Can Change Education*. Reston, VA: Reston Publishing Company, Inc (Prentice-Hall), 1984.

Klier, Betje ed. , *Technology and the Longer View*. *Proceedings of the Annual National Conference on Technology and Education* (1st, Ft. Worth, TX, April 19-20, 1984). Ft. Worth, TX: Tandy Corp., Radio Shack Education Division, April 1984.

Knupfer, Nancy N., "Change, Implementation, Equity: A Model Design for a Computer Education Plan," *University of Wisconsin-Madison* [Madison, WI], 1986.

Lewis, R., "Teachers, Pupils and Microcomputers," *Technological Horizons in Education*, vol. 10, no. 4, February 1983, pp. 81-87.

Linn, M. C. and Fisher, C. W., "The Gap between Promise and Reality in Computer Education: Planning a Response" in *Making Our Schools More Effective: Proceedings of Three State Conferences*. Alexandria, VA: ERIC Document Reproduction Service, June 1984.

Maddux, Cleborne D. and Cummings, Rhoda E., "Educational Computing at the Crossroads: Type I or Type II Uses to Predominate?," Educational Technology, vol. 26, no. 7, July 1986, pp. 34-38.

Meister, Gail R. and Levin, Henry, "Successful Integration of Microcomputers in an Elementary School," Stanford University, Center for Educational Research (IREFG) [Menlo Park, CA], May 1984.

Melmed, Arthur S., "The Technology of American Education: Problem and Opportunity," Technological Horizons in Education, vol. 14, no. 2, September 1986, pp. 77-81.

Micro-Ideas, Proceedings of the Annual Conference on "The Role of the Computer in Education" (5th, Arlington Heights, Illinois, February 20-22, 1985). Glenview, IL: Micro-Ideas, February 1985.

Murphy, Susanne, "Of Greased Pigs and Moving Targets: Computer Education in the Fast Track," Journal of Staff Development, vol. 4, no. 2, November 1983, pp. 35-41.

National Commission on Excellence in Education, A Nation at Risk: The Imperative for Educational Reform. Washington, DC: National Commission on Excellence in Education, 1983.

National Governors' Association, Results in Education: 1987. The Governors' 1991 Report on Education. Washington, DC: National Governors' Association, 1987.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

New York State Education Dept., Center for Learning Technologies, Survey of Computer Use, Spring 1983 and Microcomputer Use in New York State Public Schools, Total State, Fall 1984. Albany, NY: New York State Education Dept., Center for Learning Technologies, 1984.

O'Neal, Fred, "Waterford School and the WICAT Education Institute: An Alternative Model for CAI and Development Research," CALICO Journal, vol. 1, no. 1, June 1983, pp. 19-23+.

OECD, Center for Research and Innovation in Education, Information Technologies and Basic Learning. International Conference of National Representatives and Experts (Paris, 13th-15th October 1986). Paris: OECD, Center for Research and Innovation in Education, October 1986.

Olds, Henry F., "The Microcomputer and the Hidden Curriculum," Computers in the Schools, vol. 2, no. 1, Spring 1985, pp. 3-14.

Olson, John and Eaton, Sandra, Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education, 1986.

Papert, Seymour, *Mindstorms*. New York: Basic Books, 1980.

Parker, Walter C., "Computer -- Master or Tool?," *Principal*, vol. 63, no. 3, January 1984, pp. 49-50.

Perelman, Lewis J., *Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Pogrow, Stanley, *Education in the Computer Age: Issues of Policy, Practice, and Reform*. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Reinhold, Fran, "Electronic Learning's 1986 Annual Survey of the States: Computing in America, Computer Use in Schools has Solid State-level Support and Use is Settling into District Trends," *Electronic Learning*, October 1986, pp. 26-34.

Reynolds, Carl L., ""Enriching the Rural School Curriculum through Telecommunications" in Annual Meeting of the National Rural Teacher Education Conference (2nd, Bellingham, WA, October 8-10, 1986)," *ERIC Document Reproduction Service* [Alexandria, VA], October 1986.

Ridley, William J. and Hull, Mcallister H. Jr., *Transforming American Education: Reducing the Risk to the Nation*. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Ryan, William C. ed. , *Proceedings of NECC '86, the National Educational Computing Conference* (7th, San Diego, California, June 4-6, 1986). Eugene, OR: International Council on Computers in Education, June 1986.

Sniderman, Ron, *Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report*. Wayne, MI: Wayne County Intermediate School District, undated.

Squire, James R., "Publishers, Social Pressures, and Textbooks" in *The Textbook in American Society*. Washington, DC: U.S. Library of Congress, 1979, pp. 27-30.

State of North Carolina, *Textbook Adoption in North Carolina*. Raleigh, NC: State of North Carolina, 1978.

Sturdivant, Patricia, "Houston Researches Computer Supported Immersion Strategy," *AEDS Monitor*, vol. 21, no. 11, May-June 1983, pp. 25-27.

Taylor, Robert, *The Computer in the School: Tutor, Tool, Tutee*. New York: Teachers College Press, 1980.

Tolman, Marvin N. and Allred, Ruel A., *The Computer and Education. What Research Says to the Teacher*. West Haven, CT: Natinal Education Association, Professional Library, 1984.

Troutner, Joanne, *The Media Specialist, the Microcomputer, and the Curriculum*. Litteton, CO: Libraries Unlimited, Inc., 1983.

U.S. Congress, House Committee on Education and Labor, *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145*. Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

White, Mary Alice, "First Reply: For a Less Narrow Conception of Learning," *Prospects: Quarterly Review of Education*, vol. 15, no. 4, Winter 1985, pp. 513-14.

Zakariya, Sally Banks, "Your Computers Just Cost You a Bundle; Now Try These Nifty Ways to Use Them," *American School Board Journal*, vol. 171, no. 3, March 1984, pp. 37-38.

Zientara, Marguerite, "Social Issues: Sharing the Wealth," *InfoWorld*, vol. 6, no. 36, Sept. 3, 1984, pp. 28-32.

Selected References on Drill And Practice

Becker, Henry Jay, "How Schools Use Micro-Computers," *Classroom Computer Learning*, vol. 4, no. 2, September 1983, pp. 41-42.

Becker, Henry Jay, "Instructional Uses of School Computers: Reports from the 1985 National Survey," *The Johns Hopkins University, Center for Social Organization of Schools* [Baltimore, MD], no. 4, June 1987.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," *Harvard University, Educational Technology Center* [Cambridge, MA], Feb. 6, 1984.

Kleiman, Glenn M., *Brave New Schools: How Computers Can Change Education*. Reston, VA: Reston Publishing Company, Inc (Prentice-Hall), 1984.

Maddux, Cleborne D. and Cummings, Rhoda E., "Educational Computing at the Crossroads: Type I or Type II Uses to Predominate?," *Educational Technology*, vol. 26, no. 7, July 1986, pp. 34-38.

Merrill, Paul F., Tolman, Marvin N., Christensen, Larry, Hammons, Kathy, Vincent, Bret R., and Reynolds, Peter L., *Computers in Education*. Englewood Cliffs, NJ: Prentice-Hall, 1986.

OECD, Center for Research and Innovation in Education, *Information Technologies and Basic Learning*. *International Conference of National Representatives and Experts* (Paris, 13th-15th October 1986). Paris: OECD, Center for Research and Innovation in Education, October 1986.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results*. *The Governors' 1991 Report on Education*. *Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Sturdivant, Patricia, "Houston Researches Computer Supported Immersion Strategy," *AEDS Monitor*, vol. 21, no. 11, May-June 1983, pp. 25-27.

Taylor, Robert, *The Computer in the School: Tutor, Tool, Tutee*. New York: Teachers College Press, 1980.

Troutner, Joanne, *The Media Specialist, the Microcomputer, and the Curriculum*. Litteton, CO: Libraries Unlimited, Inc., 1983.

Selected References on

Economics Of Information

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Arrow, Kenneth J., "The Economics of Information" in *The Computer Age: A Twenty-Year View* (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, 1979, pp. 306-317.

Baumol, William J. and Ordover, J.A., "Private Financing of Information-Transfer - Theory and Execution," *Proceedings of the American Society for Information Science*, vol. 13, 1976, pp. 88-.

Baumol, William J. *et al*., *Manual of Pricing and Cost Determination for Organizations Engaged in Dissemination of Knowledge*. New York: New York University, 1980.

Boulding, Kenneth E., "The Economics of Knowledge and the Knowledge of Economics" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Braunstein, Yale M., *An Economic Rationale for Page and Submission Charges by Academic Journals*. New York: New York University Department of Economics, Center for Applied Economics, August 1975.

Braunstein, Yale M., "Information as a Commodity," *AAAS Meetings* [Boston], February 1976.

Braunstein, Yale M., "Public-Policy and Research on Economics in Information-Transfer," *Proceedings of the American Society for Information Science*, vol. 13, 1976, pp. 7-.

Braunstein, Yale M., "Costs and Benefits of Library Information: The User Point of View," *Library Trends*, vol. 28, no. 1, Summer 1979, pp. 79-87.

Braunstein, Yale M., "The Functioning of Information Markets" in *Issues in Information Policy* (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Braunstein, Yale, "Information as a Commodity: Public Policy Issues and Recent Research" in *Information Services: Economics, Management, and Technology* (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Casper, Cheryl A., "Economic Pricing Models and Their Application to Library Services" in *Information Services: Economics, Management, and Technology* (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Cooper, Michael D., "The Economics of Information" in *Annual Review of Information Science and Technology*. American Society for Information Science, 1973.

Hall, Kent, "The Economic Nature of Information," *The Information Society*, vol. 1, no. 2, 1981, pp. 143-166.

Hindle, Anthony and Raper, Diane, "The Economics of Information" in *Annual Review of Information Science and Technology*. American Society for Information Science, 1976.

Levitan, Karen B., "Needed Research in the Economics of Information Resources," *Proceedings of the American Society for Information Science*, vol. 17, 1980, p. 344.

Machlup, Fritz, *The Production and Distribution of Knowledge in the United States*. Princeton: Princeton University Press, 1962.

Machlup, Fritz, *Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital*. Princeton: Princeton University Press, 1984.

Mackaay, Ejan, *Economics of Information and Law*. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Nordhaus, William D., *Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change*. Cambridge, MA: The MIT Press, 1969.

Priest, W. Curtiss, *The Need and Value of Restructuring Human Communication Systems* (Doctoral Dissertation). Troy, NY: Rensselaer Polytechnic Institute, 1972.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Priest, W. Curtiss, *The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property* (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and

Society, Feb. 10, 1985.

Rubin, Michael Rogers, Information Economics and Policy in the United States. Littleton, CO: Libraries Unlimited, Inc., 1983.

Sappington, David E. M. and Stiglitz, Joseph E., "Privatization, Information and Incentives," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer 1987, pp. 567-585.

Stigler, G. J., "The Economics of Information" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Selected References on Economics Of Markets

Bator, Francis M., "The Anatomy of Market Failure," The Quarterly Journal of Economics, vol. 72, August 1958, pp. 351-379.

Cronin, Blaise, ""Towards Information-Based Economies" in Annual Lazerow Memorial Lecture (3rd, Bloomington, IN, April 2, 1986)," ERIC Document Reproduction Service [Alexandria, VA], April 2, 1986.

Dertouzos, James N. and Wildman, Steven S., "A Study of Economic Issues in the Recording Industry" in Copyright Issues: Cable Television and Performance Rights (Serial No. 28). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, August 1981, pp. 699-778.

Gillespie, Junetta, "Striking the "R": Demythologizing the 'Computer Revolution'," NALLD Journal, vol. 17, no. 3, Spr-Sum 1983, pp. 4-12.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Jamison, D., Klee, S., and Wells, S., The Costs of Educational Media. Beverly Hills, CA: Sage Publications, Inc., 1978.

Levin, Henry M., "Costs and Cost-Effectiveness of Computer-assisted Instruction," Public Budgeting and Finance, vol. 5, no. 1, Spring 1985, pp. 27-42.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," Stanford University, Stanford Education Policy Institute [Menlo Park, CA], November 1985.

Levin, Henry M., "Education as a Public and Private Good," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer 1987, pp. 628-641.

Machlup, Fritz, The Production and Distribution of Knowledge in the United States. Princeton: Princeton University Press, 1962.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume I, Knowledge and Knowledge Production. Princeton: Princeton University Press, 1980.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital. Princeton: Princeton University Press, 1984.

Selected References on

Economics Of Nonprofits

Ben-Ner, Avner, "Nonprofit Organizations: Why Do They Exist in Market Economies" in _The Economics of Nonprofit Institutions_ (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 94-113.

Easley, David and O'Hara, Maureen, "Optimal Nonprofit Firms" in _The Economics of Nonprofit Institutions_ (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986.

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in _The Economics of Nonprofit Institutions_ (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

Krashinsky, Michael, "Transaction Costs and a Theory of the Nonprofit Organization" in _The Economics of Nonprofit Institutions_ (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 113-142.

Rose-Ackerman, Susan ed. , _The Economics of Nonprofit Institutions_. New York: Oxford University Press, 1986.

Selected References on
Economics Of The Firm

Mansfield, Edwin, "How Economists See R&D," Harvard Business Review, Nov.-Dec. 1981, pp. 98-106.

Nelson, Richard R. and Winter, Sidney G., "In Search of Useful Theory of Innovation," Research Policy, vol. 6, 1977, pp. 36-76.

Nordhaus, William D., Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change. Cambridge, MA: The MIT Press, 1969.

Nordhaus, William D., "Private Discussion with William D. Nordhaus," MIT Center for Policy Alternatives [Cambridge, MA], February 6, 1985.

Samuelson, Paul A., Economics (Ninth Edition). New York: McGraw-Hill Book Company, 1973.

Singer, Neil M., Public Microeconomics. Boston: Little, Brown and Company, 1972.

Tewksburg, J. G., Crandall, M. S., and Crane, W. E., "Measuring the Societal Benefits of Innovation," Science, vol. 209, no. 8, August 1980, pp. 658-662.

Selected References on Educ Indust Cooperation

Fantini, Mario D. and Cadwallader, Lynn J., "Issues in Education. An Examination," *University of Massachusetts, School of Education* [Amherst, MA], 1983.

Geer, Jay D., "Sponsoring Educational Software," *Public Relations Journal*, vol. 41, no. 12, December 1985, pp. 15-16.

Goldhor, Richard S. and Lund, Robert T., *University-to Industry Technology Transfer: A Case Study in Advanced Technology*. Cambridge, MA: MIT Center for Policy Alternatives, November 1981.

Hubert, D., "Public and Private Sectors Team to Create the Ideal Program," *Public Relations Journal*, vol. 40, no. 7, July 1984, p. 40.

Kramer-Siri, Diane, "ICT: Educational-Industrial Cooperation in Action," *Technological Horizons in Education*, vol. 12, no. 4, November 1984, pp. 107-08.

Lambert, Benjamin J. III *et al*., *Initiatives to Advance Computer-Assisted Instruction*. *Report of the Joint Subcommittee to the Governor and the General Assembly of Virginia*. *House Document No*. *34*. Richmond, VA: Virginia State General Assembly, 1984.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," *Stanford University, Stanford Education Policy Institute* [Menlo Park, CA], November 1985.

Mayfield, W. A., "Developing and Managing Technology Partnerships between Industry and Higher Education" in *Annual Convention of the American Vocational Association* (Dallas, TX, December 1986). Arlington, VA: American Vocational Association, 1986.

Neill, Shirley Boes, *High Tech for Schools: Problems and Solutions*. *AASA Critical Issues Report*. Arlington, VA: American Association of School Administrators, 1984.

Rich, Don, "Partnerships Take a New Turn," *VocEd*, vol. 58, no. 4, May 1983, pp. 32-33.

Robinson, Louis, "The University-Industry Relationship," *Perspectives on Computing*, vol. 3, no. 1, March 1983, pp. 4-15.

U.S. Congress, House Committee on Science and Technology, *The Computer Literacy Act, H.R. 3750 and the National Educational Software Act, H.R. 4628*. *Hearing before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, House of*

Representatives, Ninety-Eighth Congress, Second Session. Washington, DC: U.S. Congress, House Committee on Science and Technology, no. 107, June 5, 1984.

Selected References on

Education Market

Advertising Age, "'Computer Instructor' Set," *Advertising Age*, vol. 55, no. 67, Oct. 8, 1984, p. 32.

Anderson, John J., "Apples for Education: Decade of Making the Grade," *Computer Shopper*, September 1987, pp. 19-20+.

Black, P., "Tink Tonks for High-Tech Tots," *Venture*, March 1985, p. 92+.

Blaschke, Charles L., "Microcomputers in Special Education: Trends and Projections," *Journal of Special Education Technology*, vol. 5, no. 4, Fall 1982, pp. 25-27.

Bork, Alfred, "The Fourth Revolution -- Computers and Learning" in *The Computer: Extension of the Human Mind*. *Proceedings, Annual Summer Conference* (3rd, Eugene, OR, July 21-23, 1982). Eugene, OR: University of Oregon, College of Education, July 1982.

Boston Globe, "Tandy Upstages IBM with 4 New Computers," *Boston Globe*, 1987, p. 38.

British Business, "Dutch Government Orders British Educational Software," *British Business*, vol. 15, no. 14, Dec. 7, 1984, p. 602.

British Business, "Software for Schools: UK Shows Its Lead at Didacta," *British Business*, vol. 13, no. 13, March 30, 1984, p. 612.

Business Week (Industrial Edition), "Educational Software: Why It's a Hard Sell," *Business Week* (Industrial Edition), Oct. 29, 1984, pp. 121-126.

Canter, Marc, *Important Issues Affecting the Educational Marketplace*. Chicago, IL: MacroMind, Inc., 1986.

Corporation for Public Broadcasting, *Future School Market for Instructional Programming and Services through 1990*. *Executive Summary*. Washington, DC: Corporation for Public Broadcasting, March 1986.

Crowell, Carol A., "Goodbye, Little Red Schoolhouse," *Creative Computing*, vol. 11, no. 4, April 1985, pp. 64-68+.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results*. *The Governors' 1991 Report on Education*. *Task Force on Technology*: *Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Educational Products Information Exchange Institute, "Research Indicates Stalled Software Evolution" in Microgram. Water Mill, NY: Educational Products Information Exchange Institute, 1984.

Educational Technology, "Technically Speaking.... An Occasional Column of Editorial Opinion. Yes, There Really is an Education Market for Technology," Educational Technology, vol. 26, no. 2, February 1986, p. 8.

Field, Anne R., "U.S. Publishers Want to Maximize the 'MINITEL' Potential," Business Week (Industral Edition), July 6, 1987, p. 86C.

Fuchs, Victor E., "Software Publication Considerations and Special Education," Journal of Special Education Technology, vol. 5, no. 4, Fall 1982, pp. 71-74.

Fuchs, Victor E., "Software Marketing Considerations" in Conference on the Use of Microcomputers in Special Education (Hartford, CT, March 10-12, 1983). Reston, VA: Council for Exceptional Children, March 1983.

Gelfand, M. H., "Dalton Expands Software Unit," Advertising Age, vol. 55, no. 70, Oct. 18, 1984, p. 56.

Gelling, Irving ed. , "Apples for Teachers Pay Off (educational market for microcomputers and software)," High Technology, vol. 3, no. 4, April 1983, p. 45.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gusse, David R. and Lancaster, Kent M., "Using On-Line Services Makes Course More Realistic," Journalism Educator, vol. 38, no. 3, Autumn 1983, pp. 6-10.

Heller, A., "Software for Storybooks," Venture, vol. 6, no. 4, April 1984, pp. 18-19.

Hoke, Mary Ellen, Research Report on the Japanese School System, Computer-Aided Instruction in Japan and the Japanese Home Computer Market. Boston, MA: Houghton Mifflin Co., 1984.

Holmes, Edith, "DBMS for Kids," Datamation, vol. 31, no. 8, Apr. 15, 1985, pp. 70-78.

Hood, John F. et al., Microcomputers in Schools, 1984-85. A Comprehensive Survey and Analysis. Westport, CN: Market Data Retrieval, May 1985.

Kahin, Brian, "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ], 1986.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," Stanford University, Stanford Education Policy Institute [Menlo Park, CA], November 1985.

Lewin, Daniel, "A Vendor's View: Terms of the Marketplace," Change, vol. 18, no. 3, May-June 1986, p. 37.

Mandelker, C. B., "The ABCs of Kiddie Software," Venture, vol. 7, no. 2, February 1985, pp. 10-11.

Market Data Retrieval, Education Mailing Lists and Marketing Guide. Shelton, CN: Market Data Retrieval, 1987.

Minter, B., "Spinnaker Shifts with the Wind," Venture, March 1985, p. 24+.

Moran, B., "Grolier Eyes Software Market," Advertising Age, vol. 55, no. 67, Oct. 8, 1984, p. 30.

Moran, B., "Scholastic Aiming Software at Schools ...," Advertising Age, no. 13, Feb. 18, 1985, p. 54.

Petrakos, Pamela, "Rushing Toward Courseware," 80 Microcomputing, no. 16, April 1981, pp. 79-81.

Ploch, Margie, "Computers in Schools: Can They Make the Grade?," High Technology, vol. 6, no. 9, September 1986, pp. 44-50.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Rosenberg, Ronald, "IBM Tries Again in School Market," Boston Globe, August 5, 1987, p. 71.

Schatz, Willie, "The Old School Sell," Datamation, vol. 30, no. 3, March 1984, pp. 158-164.

Smith, Bev, "Addison-Wesley Launches Info Literacy Program: Customizes EasyNet for High School Market," Information Today, February 1987, pp. 1,39.

Sprung, J.P., "The Business of Software Licensing at the University of Waterloo," Journal of the Society of Research Administrators, vol. 15, no. 2, Fall 1983, pp. 5-18.

Squire, James R., "Publishers, Social Pressures, and Textbooks" in The Textbook in American Society. Washington, DC: U.S. Library of Congress, 1979, pp. 27-30.

The Value Line Investment Survey, "Publishing Industry (Including Grolier, Harcourt Brace, Houghton Mifflin, Macmillan, McGraw-Hill, Prentice-Hall, SFN Companies)," The Value Line Investment Survey [New York], vol. 35, no. 25, March 21, 1980, pp. 1777-99.

The Value Line Investment Survey, "Publishing Industry (Including Bell & Howell, Grolier, Harcourt Brace, Houghton Mifflin, Macmillan, McGraw Hill and John Wiley)," The Value Line Investment Survey [New York], vol. 42, no. 38, June 12, 1987, pp. 1788-811.

Wagner, L., The Economics of Educational Media. New York: St. Martin's Press, 1982.

Walker, Decker F., "Computers in Schools. I: Potential & Limitations. II: The Software Problem. Educational Brief," Far West Lab. for Educational Research and Development [San Francisco, CA], February 1984.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al., Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Williamson, John H., "Textbook Publishing: Facts and Myths" in The Textbook in American Society. Washington, DC: U.S. Library of Congress, 1979, pp. 38-40.

Selected References on Educational Structure

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp., "A Network for Teacher Support -- Report of the Commissioner's Task Force on Instructional Computing," *Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp.* [Tallahassee, FL], Feb. 10, 1986.

Gillespie, Junetta, "Striking the "R": Demythologizing the 'Computer Revolution'," *NALLD Journal*, vol. 17, no. 3, Spr-Sum 1983, pp. 4-12.

Goldstein, Paul, *Schooling, Technology, and Law*. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," *European Journal of Education*, vol. 17, no. 4, 1982, pp. 339-53.

Hershey, Jacqueline A., "How Schools Sabotage a Creative Work Force: The Meaningless Repetition that is found even in Award-winning Schools is Driving Children away from Math and the Sciences. America Can't Afford that.," *Business Week* (Industrial Edition), July 13, 1987, p. 16.

Heuston, Dustin H., *The Future of Education: A Time of Hope and New Delivery Systems*. Orem, UT: WICAT, Inc., 1986.

Levin, Henry M., "Education as a Public and Private Good," *Journal of Policy Analysis and Management*, vol. 6, no. 4, Summer 1987, pp. 628-641.

Marshall, David, "Computer Technology in Education: Redefining the Modes of Educational Transmission" in *Regional Conference of Commonwealth Council for Educational Administration* (5th, New Delhi, India, January 5-7, 1984; keynote address). Alexandria, VA: ERIC Document Reproduction Service, January 1984.

Mecklenburger, James A., Blom, Don E., and Williams, Cheryl S., "Insider's Letter," *National School Boards Assoc., Inst. for the Transfer of Tecnology to Education* [Alexandria, VA], vol. 2, no. 3, June 1987.

Melmed, Arthur S., "The Technology of American Education: Problem and Opportunity," *Technological Horizons in Education*, vol. 14, no. 2, September 1986, pp. 77-81.

Perelman, Lewis J., *Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

U.S. Congress, House Committee on Education and Labor, *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145*. Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

Waggoner, Michael D. and Goldberg, Albert L., "A Forecast for Technology and Education: The Report of A Computer Conferencing Delphi," *Educational Technology*, vol. 26, no. 6, June 1986, pp. 7-14.

White, Mary Alice, "An Educated View of Technology," *ERIC Document Reproduction Service* [Alexandria, VA], March 21, 1985.

Selected References on

Entrepreneur

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang, *New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors* (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October 1984.

Fain, David, *Background Study of Alternative Policies Which Would Promote University Financed Technological Innovation*. Berkeley, CA: Teknekron, Inc., December 1974.

Kelley, Albert J., Campanella, Frank B., and McKiernan, John, *Venture Capital: A Guidebook for New Enterprises*. Chestnut Hill, MA: Boston College, School of Management, Management Institute, July 1971.

Vesper, Karl, *Venture Initiation Courses in U.S. Schools*. Seattle, WA: University of Washington, School of Business Administration, September 1974.

Woodworth, Robert T., Durkee, Peter H., Delano, Myles S., and Chambers, Edward J., *The Entrepreneurial Process: The Roles of Accountants, Bankers and Lawyers*. Seattle, WA: University of Washington, December 1970.

Young, Dennis R., "Entrepreneurship and the Behavior of Nonprofit Organizations: Elements of a Theory" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 161-184.

Selected References on

Equity

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Fantini, Mario D. and Cadwallader, Lynn J., "Issues in Education. An Examination," University of Massachusetts, School of Education [Amherst, MA], 1983.

Knupfer, Nancy N., "Change, Implementation, Equity: A Model Design for a Computer Education Plan," University of Wisconsin-Madison [Madison, WI], 1986.

Lipkin, John P., "Equity in Computer Education," Educational Leadership, vol. 41, no. 1, September 1983, p. 26.

Nelson, Richard R., "Roles of Government in a Mixed Economy," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer 1987, pp. 541-557.

OECD, Centre for Educational Research and Innovation, International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Priest, W. Curtiss and Whitbeck, Caroline, Alternative Designs for Medical Information Systems -- Consequences for Health and Human Values. Cambridge, MA: MIT Center for Policy Alternatives, September 1, 1986.

Roberts, Linda G., Naismith, Nancy Carson, Feurer, Michael, Fulton, Kathleen, Lawrence, James St., Zuckerkandel, Mia, Becker, Henry, and Ha, Peter, Trends and Status of Computers in Schools: Use in Chapter 1 Programs and Use with Limited English Proficient Students. Staff Paper. Washington, DC: U.S. Congress, Office of Technology Assessment, SET Program, March 13, 1987.

Sniderman, Ron, Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report. Wayne, MI: Wayne County Intermediate School District, undated.

Zientara, Marguerite, "Social Issues: Sharing the Wealth," InfoWorld, vol. 6, no. 36, Sept. 3, 1984, pp. 28-32.

Selected References on

Exemplary Program

Bell, T. H., "Industrial Policy: Implications for American Education. Delivered by Dr. Robert W. Worthington on Behalf of Dr. T. H. Bell, U.S. Secretary of Education," U.S. Department of Education, Office of the Secretary [Washington, DC], Oct 19, 1983.

Dede, Christopher J., Zodhiates, Philip P., and Thompson, Charles L., Intelligent Computer-Assisted Instruction: A Review and Assessment of ICAI Research and Its Potential for Education. Newton, MA: Education Development Center, May 1985.

Estes, Nolan and Klier, Betje, "An International Study of the Impact of New Information Technologies on Curriculum and Institutional Structures" in Annual Meeting of the American Educational Research Association (Chicago, IL, March 31-April 4, 1985). Washington, DC: American Educational Research Association, 1985.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, et al., Government Policy, Technological Innovation, and Alternative Energy. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

McKenzie, Floretta Dukes, "Leadership: The Critical Variable" in Annual Meeting of the Florida Association of School Administrators (Orlando, FL, June 16, 1985). Orlando: Florida Association of School Administrators, June 16, 1985.

Mecklenburger, James A., Blom, Don E., and Williams, Cheryl S., "Insider's Letter," National School Boards Assoc., Inst. for the Transfer of Tecnology to Education [Alexandria, VA], vol. 2, no. 3, June 1987.

National Governors' Association Center for Policy Research and Analysis, Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

National Governors' Association, Results in Education: 1987. The Governors' 1991 Report on Education. Washington, DC: National Governors' Association, 1987.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Reinhold, Fran and Corkett, Kay, "EL's Fifth Annual Survey of the States: Mandates -- yes, no, maybe, Though the Number of States Requiring Some Form of Computer Education has Jumped, State-level Involvement is Increasingly Taking the Form of Support for District Programs," *Electronic Learning*, October 1985, pp. 25-31.

Ridley, William J. and Hull, Mcallister H. Jr., *Transforming American Education: Reducing the Risk to the Nation*. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Spann, Milton G., Jr. and Thompson, Cynthia G., *The National Directory of Exemplary Programs in Developmental Education. Second Edition*. Boone, NC: Appalachian State Univ.; National Center for Developmental Education, 1986.

U.S. Congress, House Committee on Education and Labor, *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145*. Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

Virginia Community College System, Sterling. Inst. for Instructional Excellence, *Catalog of Exemplary Projects, 1985-86*. Sterling, VA: Virginia Community College System, Sterling. Inst. for Instructional Excellence, 1986.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., *et al.*, *Informational Technology and Its Impact on American Education*. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Selected References on

Externality

Bator, Francis M., "The Anatomy of Market Failure," The Quarterly Journal of Economics, vol. 72, August 1958, pp. 351-379.

Braunstein, Yale, "Information as a Commodity: Public Policy Issues and Recent Research" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Cross, Melvin L. and Ekelund, Robert B., Jr., "A. T. Hadley: The American Invention of the Economics of Property Rights and Public Goods," Review of Social Economy, 1981, pp. 37-50.

Gordon, Wendy J., "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," Columbia Law Review, vol. 82, 1982, pp. 1600-1657.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Herber, Bernard P., Modern Public Finance: The Study of Public Sector Economics. Homewood, IL: Richard D. Irwin, Inc., 1971.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, et al., Government Policy, Technological Innovation, and Alternative Energy. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

House, Robert W., Nash, Robert T., and Goodrich, Robert S., Formulating Public Policy to Improve Productivity Through Technological Innovation. Nashville, TN: Vanderbilt University, Technology and Public Policy Program, September 1977.

Kamien, Morton I. and Schwartz, Nacy L., Market Structure and Innovation. New York: Cambridge University Press, 1982.

Larson, Gary O., The Reluctant Patron: The United States Government and the Arts, 1943-1965. Philadelphia: University of Pennsylvania Press, 1983.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital. Princeton: Princeton University Press, 1984.

Mackaay, Ejan, *Economics of Information and Law*. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Magaziner, Ira C., "The Rationale for a U.S. Industrial Policy," *Journal of Contemporary Business*, vol. 11, no. 1.

Mansfield, Edwin, Rapoport, John, Romeo, Anthony, Wagner, Samuel, and Beardsley, George, "Social and Private Rates of Return from Industrial Innovations," *Quarterly Journal of Economics*, vol. 91, May 1977, pp. 221-240.

Mansfield, Edwin, "How Economists See R&D," *Harvard Business Review*, Nov.-Dec. 1981, pp. 98-106.

Nordhaus, William D., *Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change*. Cambridge, MA: The MIT Press, 1969.

Nordhaus, William D., "Private Discussion with William D. Nordhaus," *MIT Center for Policy Alternatives* [Cambridge, MA], February 6, 1985.

Pigou, Arthur C., *The Economics of Welfare* (4th edition). London: Macmillan, 1932.

Pogrow, Stanley, *Education in the Computer Age: Issues of Policy, Practice, and Reform*. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogue, Thomas F. and Sgontz, L. G., *Government and Economic Choice: An Introduction to Public Finance*. Boston: Houghton Mifflin Company, 1978.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Priest, W. Curtiss, *The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property* (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Samuelson, Paul A., *Economics* (Ninth Edition). New York: McGraw-Hill Book Company, 1973.

Scitovsky, Tibor, "Two Concepts of External Economics," *The Journal of Political Economy*, vol. 62, April 1954, pp. 143-151.

Singer, Neil M., *Public Microeconomics*. Boston: Little, Brown and Company, 1972.

Tassey, Gregory, "Infratechnologies and the Role of Government," Technological Forecasting and Social Change, vol. 21, 1982, pp. 163-180.

Tewksburg, J. G., Crandall, M. S., and Crane, W. E., "Measuring the Societal Benefits of Innovation," Science, vol. 209, no. 8, August 1980, pp. 658-662.

Viner, Jacob, "Cost Curves and Supply Curves," Zeitschrift fur Nationalokonomie, vol. 3, 1931, pp. 23-46.

Selected References on Federal Role

Aldrich, Robert F., Belair, Robert R., Braunstein, Yale M., Peyton, David Y., Pogrow, Stanley, Roberston, Lawrence S., and Wildavsky, Aaron B., Issues in Information Policy. Washington, DC: U.S. Department of Commerce, National Telecommunications and Inf. Admin., February 1981.

Bell, T. H., "Industrial Policy: Implications for American Education. Delivered by Dr. Robert W. Worthington on Behalf of Dr. T. H. Bell, U.S. Secretary of Education," U.S. Department of Education, Office of the Secretary [Washington, DC], Oct 19, 1983.

Branscomb, Lewis M., "Insights: Technology Promotion: What the Fed Should and Should Not Do," High Technology, vol. 5, no. 5, May 1985, pp. 11,14.

British Business, "Dutch Government Orders British Educational Software," British Business, vol. 15, no. 14, Dec. 7, 1984, p. 602.

British Business, "Software for Schools: UK Shows Its Lead at Didacta," British Business, vol. 13, no. 13, March 30, 1984, p. 612.

Chartrand, Robert L. and Miller, Nancy R., Information Policy: Public Laws from the 97th Congress. Washington, DC: U.S. Congressional Research Service, March 1983.

Educational Research Service, ERS School Research Forum, Education for a High Technology Future: The Debate over the Best Curriculum. Arlington, VA: Educational Research Service, ERS School Research Forum, 1983.

Estes, Nolan and Klier, Betje, "An International Study of the Impact of New Information Technologies on Curriculum and Institutional Structures" in Annual Meeting of the American Educational Research Association (Chicago, IL, March 31-April 4, 1985). Washington, DC: American Educational Research Association, 1985.

Ferris, Charles D., "Digital Recorders: An Audio Leap Ahead," Boston Globe, August 14, 1987, p. 15.

Gelfond, Susan, "A Bill That Separates Software Renters From Pirates (Computer Software Rental Act of 1987 supported by SPA and Rep. Patricia Schroeder)," Business Week (Industrial Edition), May 11, 1987, p. 136C.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," European Journal of Education, vol. 17, no. 4, 1982, pp. 339-53.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, *et al.*, *Government Policy, Technological Innovation, and Alternative Energy*. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Institute for Educational Leadership, *Technology and Education: Policy, Implementation, Evaluation* (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership, 1981.

Johnston, Jerome, "Computers and the Schools: The Next Decade," *University of Michigan, Inst. for Social Research* [Ann Arbor, MI], March 1985.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," *Harvard University, Educational Technology Center* [Cambridge, MA], Feb. 6, 1984.

Meyer-Krahmer, Frieder, Gielow, Gisela, and Kuntze, Uwe, "Impacts of Government Incentives Towards Industrial Innovation: An Analysis of the Federal Programme Funding R&D Personnel in the Federal Republic of Germany," *Research Policy*, vol. 12, 1983, pp. 153-169.

Murnane, Richard J. and Nelson, Richard R., "Production and Innovation When Techniques are Tacit," *Journal of Economic Behavior and Organization*, vol. 5, 1984, pp. 353-373.

National Commission on Libraries and Information Science, *Evaluation of the Effectiveness of Federal Funding of Public Libraries*. Washington, DC: National Commission on Libraries and Information Science, December 1976.

Nelson, Richard R., "Roles of Government in a Mixed Economy," *Journal of Policy Analysis and Management*, vol. 6, no. 4, Summer 1987, pp. 541-557.

OECD, Centre for Educational Research and Innovation, *International Conference on Education and New Information Technologies* (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

Perelman, Lewis J., *Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Pogrow, Stanley, *Education in the Computer Age: Issues of Policy, Practice, and Reform*. Beverly Hills, CA: Sage Publications, Inc., 1983.

Priest, W. Curtiss, *The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property* (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Rao, K. Nagaraja, Schmitt, Thomas, and Tschoegl, Adrian E., *Organizational Models for the Support of Industrial Innovation: A Review of Institutions in Ten Countries*. Cambridge, MA: MIT Center for Policy Alternatives, January 1981.

Ridley, William J. and Hull, Mcallister H. Jr., *Transforming American Education: Reducing the Risk to the Nation*. Washington, DC: U.S. D~~epartment of~~ Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Roberts, Linda G., Naismith, Nancy Carson, Feurer, Michael, Fulton, Kathleen, Lawrence, James St., Zuckerkandel, Mia, Becker, Henry, and Ha, Peter, *Trends and Status of Computers in Schools: Use in Chapter 1 Programs and Use with Limited English Proficient Students*. *Staff Paper*. Washington, DC: U.S. Congress, Office of Technology Assessment, SET Program, March 13, 1987.

Sappington, David E. M. and Stiglitz, Joseph E., "Privatization, Information and Incentives," *Journal of Policy Analysis and Management*, vol. 6, no. 4, Summer 1987, pp. 567-585.

Scandura, Joseph M., "An Analysis of the Federal Role in Instructional Technology in the Era of the New Federalism" in *Annual Meeting of the American Educational Research Association* (Montreal, Canada, April 14, 1983). Washington, DC: American Educational Research Association, April 14, 1983.

Schacht, Wendy H., "Small Business Innovation Development Act: H.R. 4260 Amendments to P.L. 97-219 (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Stevenson-Wydler Technology Innovation Act: A Federal Effort to Promote Industrial Innovation (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Industrial Innovation: Debate over Government Policy (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], July 1, 1987.

Schacht, Wendy H., "Trade, Technology, and Competitiveness (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 18, 1987.

Schacht, Wendy H., "Technology Transfer: Utilization of Federally Funded Research & Development (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 15, 1987.

The Federal Minister for Research and Technology, *Sixth Report of the Federal Government on Research*. Bonn, Germany: The Federal Minister for Research and Technology, 1980.

U.S. Congress, Committee on Science and Technology, *Computers and Education. Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology. U.S. House of Representatives, Ninety-Eighth Congress, First Session* (September 28, 29, 1983). Washington, DC: U.S. Congress, Committee on Science and Technology, 1983.

U.S. Congress, Committee on Ways and Means, *Computer Contribution Act of 1983. Hearing before the Subcommittee on Select Revenue Measures of the Committee on Ways and Means. House of Representatives, Ninety-Eighth Congress, First Session, on H.R. 701* (San Francisco, CA). Washington, DC: U.S. Congress, Committee on Ways and Means, Nov. 11, 1983.

U.S. Congress, Committee on Education and Labor, House of Representatives, *Hearing on Computer Education. Hearing before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eigth Congress, Second Session, on H.R. 3750, H.R. 1134, and H.R. 4628.* Washington, DC: U.S. Congress, Committee on Education and Labor, House of Representatives, 1984.

U.S. Congress, House Committee on Education and Labor, *Oversight on Educational Technology. Joint Hearing before the Subcommittee on Select Education of the Committee on Education and Labor. House of Representatives, Ninety-Seventh Congress, Second Session.* Washington, DC: U.S. Congress, House Committee on Education and Labor, Sept. 14, 1982.

U.S. Congress, House Committee on Education and Labor, *Hearing on National Centers for Personal Computers in Education. Hearing before the Subcommittee on Elementary, Secondary and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eighth Congress, First Session on H.R. 1134 to Amend Title III of the Elementary and Secondary Education Act of 1965 to Provide for One or More National Centers for Personal Computers in Education.* Washington, DC: U.S. Congress, House Committee on Education and Labor, April 21, 1983.

U.S. Congress, House Committee on Science and Technology, *The Computer Literacy Act, H.R. 3750 and the National Educational Software Act, H.R. 4628. Hearing before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, House of Representatives, Ninety-Eighth Congress, Second Session.* Washington, DC: U.S. Congress, House Committee on Science and Technology, no. 107, June 5, 1984.

U.S. Congress, House Committee on Education and Labor, *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145.* Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

U.S. Congress, Library of Congress, Congressional Research Service, *The Congress and Information. Staff Report prepared for the use of the Select Committee on Committees, U.S. House of Representatives by the*

Science Research Division, Congressional Research Service, Library of Congress. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, May 5, 1974.

U.S. Congress, Library of Congress, Congressional Research Service, *Information Technology in Education: Perspectives and Potentials. Report prepared for the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, U.S. House of Representatives, Ninety-Sixth Congress, Second Session, Serial QQQ*. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, December 1980.

U.S. Congress, Library of Congress, Congressional Research Service, *The Information Science and Technology Act of 1981. Report prepared for the Subcommittee on Science, Research and Technology transmitted to the Committee on Science and Technology. U.S. House of Representatives, Ninety-Seventh Congress, Second Session, Serial DD*. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, June 1982.

U.S. Congress, Office of Technology Assessment, *Information Technology R&D: Critical Trends and Issues*. Washington, DC: U.S. Congress, Office of Technology Assessment, February 1985.

U.S. Congress, Senate Committee on Commerce, Sci, *Competitive Challenge Facing U.S. Industry, Hearings before the Committee on Commerce, Science, and Transportation, United State Senate, One Hundredth Congress, First Session, on Competitive Challenge Facing U.S. Industries in the Science, Technological, and Industrial Fields*. Washington, DC: U.S. Congress, Senate Committee on Commerce, Sci, 1987.

U.S. Congress, Senate Subcommittee on Science, Technology, and Space, *New Technologies on Economic Competitiveness, Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-ninth Congress, First Session, on Effect of New Technologies on Economic Competitiveness: Technology Transfer*. Washington, DC: U.S. Congress, Senate Subcommittee on Science, Technology, and Space, 1985.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., *et al.*, *Informational Technology and Its Impact on American Education*. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Wilson, Andrew H., *Governments and Innovation*. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April 1973.

Zucker, Andrew, "Computers in Education: National Policy in the USA," *European Journal of Education*, vol. 17, no. 4, 1982, pp. 395-410.

Selected References on

Foreign Experience

British Business, "Dutch Government Orders British Educational Software," British Business, vol. 15, no. 14, Dec. 7, 1984, p. 602.

British Business, "Software for Schools: UK Shows Its Lead at Didacta," British Business, vol. 13, no. 13, March 30, 1984, p. 612.

Estes, Nolan and Klier, Betje, "An International Study of the Impact of New Information Technologies on Curriculum and Institutional Structures" in Annual Meeting of the American Educational Research Association (Chicago, IL, March 31-April 4, 1985). Washington, DC: American Educational Research Association, 1985.

Gillies, Donald J., "CAL in Canada: Innovations and Their Sources in Teaching and Learning," Computers and Education, vol. 10, no. 1, January 1986, pp. 221-27.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," European Journal of Education, vol. 17, no. 4, 1982, pp. 339-53.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, et al., Government Policy, Technological Innovation, and Alternative Energy. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Hoke, Mary Ellen, Research Report on the Japanese School System, Computer-Aided Instruction in Japan and the Japanese Home Computer Market. Boston, MA: Houghton Mifflin Co., 1984.

Hollomon, J. Herbert, Allen, Thomas J. Jr., Ashford, Nicholas A., et al., National Support for Science & Technology: An Examination of Foreign Experience: Summary. Cambridge, MA: MIT Center for Policy Alternatives, August 18, 1975.

Hollomon, J. Herbert, Heaton, George R., et al., Government Involvement in the Innovation Process: Policy Implications (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

IFO - Institut fur Wirtschaftsforschung, IFO Investment Test (Survey of Innovation in Firms). Munchen, Germany: IFO - Institut fur Wirtschaftsforschung, 1980.

Lauterbach, Roland, "Preparing for Change -- Anticipating New Information Technology in German Primary Education," Programmed Learning and Educational Technology, vol. 23, no. 4, November 1986, pp. 337-45.

Nora, Simon and Minc, Alain, The Computerization of Society (Introduction by Daniel Bell). Cambridge, MA: MIT Press, 1980.

OECD, Centre for Educational Research and Innovation, International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

OECD, Center for Research and Innovation in Education, Information Technologies and Basic Learning. International Conference of National Representatives and Experts (Paris, 13th-15th October 1986). Paris: OECD, Center for Research and Innovation in Education, October 1986.

Pavitt, Keith and Walker, W., "Government Policies Towards Industrial Innovation: A Review," Research Policy, vol. 5, 1976, pp. 11-97.

Rao, K. Nagaraja, Schmitt, Thomas, and Tschoegl, Adrian E., Organizational Models for the Support of Industrial Innovation: A Review of Institutions in Ten Countries. Cambridge, MA: MIT Center for Policy Alternatives, January 1981.

Swedish National Board for Technical Development, National Microelectronic Program. Stockholm, Sweden: Swedish National Board for Technical Development, no. 424, 1983

The Federal Minister for Research and Technology, Sixth Report of the Federal Government on Research. Bonn, Germany: The Federal Minister for Research and Technology, 1980.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al., Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Selected References on

Government Role

Bendaniel, D.J., *A Study of Severed Venture Mechanism for Technological Innovation and Its Broader Application to American Industry*. Schenectady, NY: General Electric Co., The Technical Ventures Operation, December 1974.

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang, *New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors* (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October 1984.

Fain, David, *Background Study of Alternative Policies Which Would Promote University Financed Technological Innovation*. Berkeley, CA: Teknekron, Inc., December 1974.

Gee, Sherman, *Technology Transfer, Innovation, and International Competitiveness*. New York: John Wiley & Sons, 1981.

Hollomon, J. Herbert, Allen, Thomas J. Jr., Ashford, Nicholas A., *et al.*, *National Support for Science & Technology: An Examination of Foreign Experience: Summary*. Cambridge, MA: MIT Center for Policy Alternatives, August 18, 1975.

Hollomon, J. Herbert, Heaton, George R., *et al.*, *Government Involvement in the Innovation Process: Policy Implications* (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

Institute for Educational Leadership, *Technology and Education: Policy, Implementation, Evaluation* (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership, 1981.

Pavitt, Keith and Walker, W., "Government Policies Towards Industrial Innovation: A Review," *Research Policy*, vol. 5, 1976, pp. 11-97.

Pavitt, Keith, "Government Policies Towards Innovation: A Review of Empirical Findings," *OMEGA, The International Journal of Management Science*, vol. 4, no. 5, 1976, pp. 539-557.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Rubin, Michael Rogers, *Information Economics and Policy in the United States*. Littleton, CO: Libraries Unlimited, Inc., 1983.

Schacht, Wendy H., "Small Business Innovation Development Act: H.R. 4260 Amendments to P.L. 97-219 (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Stevenson-Wydler Technology Innovation Act: A Federal Effort to Promote Industrial Innovation (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Industrial Innovation: Debate over Government Policy (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], July 1, 1987.

Schacht, Wendy H., "Trade, Technology, and Competitiveness (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 18, 1987.

Schacht, Wendy H., "Technology Transfer: Utilization of Federally Funded Research & Development (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 15, 1987.

Swedish National Board for Technical Development, *National Microelectronic Program*. Stockholm, Sweden: Swedish National Board for Technical Development, no. 424, 1983.

Tassey, Gregory, "Infratechnologies and the Role of Government," *Technological Forecasting and Social Change*, vol. 21, 1982, pp. 163-180.

The Federal Minister for Research and Technology, *Sixth Report of the Federal Government on Research*. Bonn, Germany: The Federal Minister for Research and Technology, 1980.

U.S. Congress, Senate Committee on Commerce, Sci, *Competitive Challenge Facing U.S. Industry, Hearings before the Committee on Commerce, Science, and Transportation, United State Senate, One Hundredth Congress, First Session, on Competitive Challenge Facing U.S. Industries in the Science, Technological, and Industrial Fields*. Washington, DC: U.S. Congress, Senate Committee on Commerce, Sci, 1987.

U.S. Congress, Subcommittee on Science, Technology, and Space, *Role of Technology in Promoting Industrial Competitiveness. Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-Eight Congress, First Session, on S. 1286, To Establish A Program to Conduct Research and Development for Improved Manufacturing Technologies, and for other Purposes*. Washington, DC: U.S. Congress, Subcommittee on Science, Technology, and Space, 1983.

U.S. Congress, Senate Subcommittee on Science, Technology, and Space, *New Technologies on Economic Competitiveness, Hearings before the Subcommittee on Science, Technology, and Space of the Committee on*

Commerce, Science, and Transportation, United States Senate, Ninety-ninth Congress, First Session, on Effect of New Technologies on Economic Competitiveness: Technology Transfer. Washington, DC: U.S. Congress, Senate Subcommittee on Science, Technology, and Space, 1985.

Wilson, Andrew H., Governments and Innovation. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April 1973.

Woodworth, Robert T., Durkee, Peter H., Delano, Myles S., and Chambers, Edward J., The Entrepreneurial Process: The Roles of Accountants, Bankers and Lawyers. Seattle, WA: University of Washington, December 1970.

Selected References on Indivisibility

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Braunstein, Yale M., "Information as a Commodity," *AAAS Meetings* [Boston], February 1976.

Braunstein, Yale M., "The Functioning of Information Markets" in *Issues in Information Policy* (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Braunstein, Yale, "Information as a Commodity: Public Policy Issues and Recent Research" in *Information Services: Economics, Management, and Technology* (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Herber, Bernard P., *Modern Public Finance: The Study of Public Sector Economics*. Homewood, IL: Richard D. Irwin, Inc., 1971.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, *et al*., *Government Policy, Technological Innovation, and Alternative Energy*. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Nordhaus, William D., *Invention, Growth, and Welfare: A Theoretical Treatment of Technological Change*. Cambridge, MA: The MIT Press, 1969.

Pethig, Rudiger, "On the Production and Distribution of Information," *Zeitschrift fur Nationalokonomie* (Journal of Economics), vol. 43, no. 4, 1983, pp. 383-403.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Selected References on

Information As Commodity

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Braunstein, Yale M., "Information as a Commodity," AAAS Meetings [Boston], February 1976.

Braunstein, Yale, "Information as a Commodity: Public Policy Issues and Recent Research" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Selected References on

Information: Asymmetry

Ben-Ner, Avner, "Nonprofit Organizations: Why Do They Exist in Market Economies" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 94-113.

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

Krashinsky, Michael, "Transaction Costs and a Theory of the Nonprofit Organization" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 113-142.

Kwon, Young K., "Private versus Public Production of Information," *Journal of Economic Behavior & Organization*, vol. 3, 1982, pp. 345-356.

Selected References on

Information: Search

Arrow, Kenneth J., "The Economics of Information" in The Computer Age: A Twenty-Year View (Edited by Michael L. Dertouzos and Joel Moses). Cambridge, MA: MIT Press, 1979, pp. 306-317.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Kwon, Young K., "Private versus Public Production of Information," Journal of Economic Behavior & Organization, vol. 3, 1982, pp. 345-356.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," Stanford University, Stanford Education Policy Institute [Menlo Park, CA], November 1985.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Schotter, A. and Braunstein, Y. M., "Economic Search - An Experimental-Study," Economic Inquiry, vol. 19, no. 1, 1981, pp. 1-25.

Stigler, G. J., "The Economics of Information" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Walker, Decker F., "Computers in Schools. I: Potential & Limitations. II: The Software Problem. Educational Brief," Far West Lab. for Educational Research and Development [San Francisco, CA], February 1984.

Weaver, Dave and Holznagel, Don, "An Analysis of Available Courseware," Northwest Regional Educational Laboratory [Portland, OR], April 1984.

Selected References on

Information: Transfers Good

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Braunstein, Yale M., "The Functioning of Information Markets" in Issues in Information Policy (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Gordon, Wendy J., "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," Columbia Law Review, vol. 82, 1982, pp. 1600-1657.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume I, Knowledge and Knowledge Production. Princeton: Princeton University Press, 1980.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Pethig, Rudiger, "On the Production and Distribution of Information," Zeitschrift fur Nationalokonomie (Journal of Economics), vol. 43, no. 4, 1983, pp. 383-403.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Priest, W. Curtiss, The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Selected References on

Innovation

Abernathy, William J. and Utterback, James M., "Innovation and the Evolution of Technology in the Firm," *Harvard University, Harvard Business School* [Cambridge, MA], June 1976.

Anandam, Kamala, "Technology for Education: Promises and Problems," *New Directions for Community Colleges*, vol. 14, no. 3, Fall 1986, pp. 65-72.

Bendaniel, D.J., *A Study of Severed Venture Mechanism for Technological Innovation and Its Broader Application to American Industry*. Schenectady, NY: General Electric Co., The Technical Ventures Operation, December 1974.

Cohen, Mollie L., "Computer Corner (How social studies teacher successfully marketed own tutorial programs)," *Social Education*, vol. 47, no. 6, October 1983, pp. 456-59.

Cropp, J. A. D., Harris, D. C., and Stern, E. S., *Trade in Innovation: The Ins and Outs of Licensing*. London: Wiley - Interscience, John Wiley & Sons Ltd, 1970.

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang, *New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors* (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October 1984.

Fain, David, *Background Study of Alternative Policies Which Would Promote University Financed Technological Innovation*. Berkeley, CA: Teknekron, Inc., December 1974.

Gee, Sherman, *Technology Transfer, Innovation, and International Competitiveness*. New York: John Wiley & Sons, 1981.

Gillies, Donald J., "CAL in Canada: Innovations and Their Sources in Teaching and Learning," *Computers and Education*, vol. 10, no. 1, January 1986, pp. 221-27.

Goldhor, Richard S. and Lund, Robert T., *University-to Industry Technology Transfer: A Case Study in Advanced Technology*. Cambridge, MA: MIT Center for Policy Alternatives, November 1981.

Hansen, Kenneth H., "Megatrends in American Society: Policy Issues for State Education Agencies. An Issues Analysis Paper.," *Northwest Regional Education Laboratory* [Portland, OR], June 1983.

Harmon, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D., *Technological Innovation by Firms: Data Appendixes on Computers and Machine Tools*. Santa Monica, CA: Rand Corporation, November 1977.

Harman, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D., *Technological Innovation by Firms: Enhancement of Product Quality*. Santa Monica, CA: Rand Corporation, November 1977.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, *et al*., *Government Policy, Technological Innovation, and Alternative Energy*. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Hill, Christopher T., Priest, W. Curtiss, *et al*., *Supporting Innovation: A Policy Study*. Cambridge, MA: MIT Center for Policy Alternatives, 1980.

Hollomon, J. Herbert, Allen, Thomas J. Jr., Ashford, Nicholas A., *et al*., *National Support for Science & Technology: An Examination of Foreign Experience: Summary*. Cambridge, MA: MIT Center for Policy Alternatives, August 18, 1975.

Hollomon, J. Herbert, Heaton, George R., *et al*., *Government Involvement in the Innovation Process: Policy Implications* (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

House, Robert W., Nash, Robert T., and Goodrich, Robert S., *Formulating Public Policy to Improve Productivity Through Technological Innovation*. Nashville, TN: Vanderbilt University, Technology and Public Policy Program, September 1977.

Hurly, Paul and Hlynka, Denis, "Prisoners of the Cave: Can Instructional Technology Improve Education?," *Computers and Education*, vol. 8, no. 4, 1984, pp. 427-34.

IFO - Institut fur Wirtschaftsforschung, *IFO Investment Test* (Survey of Innovation in Firms). Munchen, Germany: IFO - Institut fur Wirtschaftsforschung, 1980.

Kamien, Morton I. and Schwartz, Nacy L., *Market Structure and Innovation*. New York: Cambridge University Press, 1982.

Katz, Michael L. and Shapiro, Carl, "R&D Rivalry with Licensing or Imitation," *The American Economic Review*, vol. 77, no. 3, June 1987, pp. 402-420.

Kearsley, G. *et al*., "Two Decades of Computer Based Instruction Projects: What Have We Learned?," *Technological Horizons in Education*, vol. 10, no. 3, January 1983, pp. 90-94.

Kelley, Albert J., Campanella, Frank B., and McKiernan, John, *Venture Capital: A Guidebook for New Enterprises*. Chestnut Hill, MA: Boston College, School of Management, Management Institute, July 1971.

Kotler, Philip and Dubois, Bernard, "Education Problems and Marketing" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Mansfield, Edwin, Rapoport, John, Romeo, Anthony, Wagner, Samuel, and Beardsley, George, "Social and Private Rates of Return from Industrial Innovations," Quarterly Journal of Economics, vol. 91, May 1977, pp. 221-240.

Mansfield, Edwin, "How Economists See R&D," Harvard Business Review, Nov.-Dec. 1981, pp. 98-106.

Masland, Andrew T., "Academic Computing as Technological Innovation" in Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984). Washington, DC: American Educational Research Association, April 1984.

Mayer, R., Nicosia, F. M., and Middlebrook, S., Technological Change, Product Proliferation and Consumer Decision Processess. Volume 4 -- Technology, the Consumer, and Information Flows. Berkeley, CA: University of California, Graduate School of Business Administration, August 1974.

McCredie, John W., "Strategies for Campus Computing," Perspectives on Computing, vol. 2, no. 3, October 1982, pp. 4-10.

McDonald, Joseph P., "Microworlds and Expert Systems: Is it Either or Can it be Both? Report of a Conference Sponsored by the Educational Technology Center (Cambridge, MA, January 11-12, 1985)," Harvard University, Educational Technology Center [Cambridge, MA], January 1985.

Murnane, Richard J. and Nelson, Richard R., "Production and Innovation When Techniques are Tacit," Journal of Economic Behavior and Organization, vol. 5, 1984, pp. 353-373.

Nelson, Richard R. and Winter, Sidney G., "In Search of Useful Theory of Innovation," Research Policy, vol. 6, 1977, pp. 36-76.

Norris, William C., "Improving Education Through Technological Innovation," Technological Horizons in Education, vol. 12, no. 10, June 1985, pp. 65-68.

O'Neal, Fred, "Waterford School and the WICAT Education Institute: An Alternative Model for CAI and Development Research," CALICO Journal, vol. 1, no. 1, June 1983, pp. 19-23+.

Pavitt, Keith and Walker, W., "Government Policies Towards Industrial Innovation: A Review," Research Policy, vol. 5, 1976, pp. 11-97.

Pavitt, Keith, "Government Policies Towards Innovation: A Review of Empirical Findings," OMEGA, The International Journal of Management Science, vol. 4, no. 5, 1976, pp. 539-557.

Perelman, Lewis J., *Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Priest, W. Curtiss and Hill, Christopher T., *Identifying and Assessing Discrete Technological Innovations: An Approach to Output Indicators* (Prepared for the National Science Foundation, Division of Science Resource Studies). Lexington, MA: Center for Information Technology and Society, August 1980.

Priest, W. Curtiss, "CPA's Bibliographic Management System: An Illustration of Market Push and Technology Pull," *Center for Policy Alternatives, MIT* [Cambridge, MA], Spring 1982, p. 9.

Priest, W. Curtiss and Whitbeck, Caroline, *Alternative Designs for Medical Information Systems -- Consequences for Health and Human Values*. Cambridge, MA: MIT Center for Policy Alternatives, September 1, 1986.

Rao, K. Nagaraja, Schmitt, Thomas, and Tschoegl, Adrian E., *Organizational Models for the Support of Industrial Innovation: A Review of Institutions in Ten Countries*. Cambridge, MA: MIT Center for Policy Alternatives, January 1981.

Robinson, Louis, "The University-Industry Relationship," *Perspectives on Computing*, vol. 3, no. 1, March 1983, pp. 4-15.

Rogers, Everett M. and Shoemaker, F. Floyd, *Communication of Innovations: A Cross-Cultural Approach*. London: Collier-MacMillan Publishers, 1971.

Schacht, Wendy H., "Small Business Innovation Development Act: H.R. 4260 Amendments to P.L. 97-219 (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Stevenson-Wydler Technology Innovation Act: A Federal Effort to Promote Industrial Innovation (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], Dec. 1, 1986.

Schacht, Wendy H., "Industrial Innovation: Debate over Government Policy (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], July 1, 1987.

Schacht, Wendy H., "Trade, Technology, and Competitiveness (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 18, 1987.

Schacht, Wendy H., "Technology Transfer: Utilization of Federally Funded Research & Development (Issue Brief)," *U.S. Congressional Research Service, Science Policy Research Division* [Washington, DC], May 15, 1987.

Schooler, Douglas K., "Microcomputer Telecommunication: Bringing Education Online for an Expanded Classroom," *ERIC Document Reproduction Service* [Alexandria, VA], May 22, 1984.

Sheth, Jagdish N., Wright, Peter L., eds. , Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Sprecher, Jerry W. and Chambers, Jack A., "Computer Assisted Instruction: Factors Affecting Courseware Development," Journal of Computer-Based Instruction, vol. 7, no. 2, November 1980, pp. 47-57.

Summers, Edward G., "Microcomputers as a New Technological Innovation in Education: Growth of the Related Journal Literature," Educational Technology, vol. 25, no. 8, August 1985, pp. 5-14.

Tassey, Gregory, "Infratechnologies and the Role of Government," Technological Forecasting and Social Change, vol. 21, 1982, pp. 163-180.

Tewksburg, J. G., Crandall, M. S., and Crane, W. E., "Measuring the Societal Benefits of Innovation," Science, vol. 209, no. 8, August 1980, pp. 658-662.

U.S. Congress, Office of Technology Assessment, Information Technology R&D: Critical Trends and Issues. Washington, DC: U.S. Congress, Office of Technology Assessment, February 1985.

U.S. Congress, Senate Committee on Commerce, Sci, Competitive Challenge Facing U.S. Industry, Hearings before the Committee on Commerce, Science, and Transportation, United State Senate, One Hundredth Congress, First Session, on Competitive Challenge Facing U.S. Industries in the Science, Technological, and Industrial Fields. Washington, DC: U.S. Congress, Senate Committee on Commerce, Sci, 1987.

U.S. Congress, Subcommittee on Science, Technology, and Space, Role of Technology in Promoting Industrial Competitiveness. Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-Eight Congress, First Session, on S. 1286, To Establish A Program to Conduct Research and Development for Improved Manufacturing Technologies, and for other Purposes. Washington, DC: U.S. Congress, Subcommittee on Science, Technology, and Space, 1983.

U.S. Congress, Senate Subcommittee on Science, Technology, and Space, New Technologies on Economic Competitiveness, Hearings before the Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science, and Transportation, United States Senate, Ninety-ninth Congress, First Session, on Effect of New Technologies on Economic Competitiveness: Technology Transfer. Washington, DC: U.S Congress, Senate Subcommittee on Science, Technology, and Space, 1985.

Utterback, James M. and Abernathy, William J., "A Dynamic Model of Process and Product Innovation," OMEGA, The International Journal of Management Science, vol. 3, no. 6, 1975, pp. 639-656.

Vesper, Karl, Venture Initiation Courses in U.S. Schools. Seattle, WA: University of Washington, School of Business Administration, September 1974.

Watjen, L. Russel, "Software Development in Higher Education," Journal of Career Development, vol. 12, no. 2, December 1985, pp. 171-75.

Wedman, John F., "Educational Computing Inservice Design: Implications from Teacher' Concerns Research" in Annual Convention of the Association for Educational Communications and Technology (Las Vegas, NV, January 16-21, 1986). Washington, DC: Association for Educational Communications and Technology (AECT), January 1986.

White, Mary Alice, "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21, 1985.

Wilson, Andrew H., Governments and Innovation. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April 1973.

Young, Dennis R., "Entrepreneurship and the Behavior of Nonprofit Organizations: Elements of a Theory" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 161-184.

Zaltman, Gerald, "Strategies for Diffusing Innovations" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Zukowski, Angela Ann, "Vision or Fear? Teacher Response to Educational Technology," Momentum, vol. 17, no. 1, February 1986, pp. 13-16.

Selected References on

Innovation Cycle

Abernathy, William J. and Utterback, James M., "Innovation and the Evolution of Technology in the Firm," *Harvard University, Harvard Business School* [Cambridge, MA], June 1976.

Nelson, Richard R. and Winter, Sidney G., "In Search of Useful Theory of Innovation," *Research Policy*, vol. 6, 1977, pp. 36-76.

Utterback, James M. and Abernathy, William J., "A Dynamic Model of Process and Product Innovation," *OMEGA, The International Journal of Management Science*, vol. 3, no. 6, 1975, pp. 639-656.

Selected References on

Innovation: Adoption

Allen, Thomas J., Managing the Flow of Technology. Cambridge, MA: MIT Press, 1977.

Anderson, John J., "Computers in Education: The Pitfalls," Computer Shopper, September 1987, p. 199+.

Batey, Anne, "Integrating Microcomputers into Science Education. Computer Technology Program Reports to Decision Makers.," Northwest Regional Educational Laboratory [Portland, OR], no. 6, November 1985.

Becker, Henry Jay, "How Schools Use Micro-Computers," Classroom Computer Learning, vol. 4, no. 2, September 1983, pp. 41-42.

Bikson, Tora, "Understanding the Implementation of Office Technology" in Technolology and the Transformation of White Collar Work. Hillsdale, NJ: Erlbaum Associates, 1987, pp. 155-176.

Bok, Derek, "Looking into Education's High-Tech Future," EDUCOM Bulletin, vol. 20, no. 3, Fall 1985, pp. 2-10.

Cahn, Dudley D., "Information Technology and Interpersonal Behavior: Impact on Supervisor-Subordinate and Teacher-Student Relationships" in Annual Meeting of the Eastern Communication Association (76th, Providence, RI, May 2-5, 1985). Alexandria, VA: ERIC Document Reproduction Service, May 1985.

Carl, David L. and Hoelscher, Sheila, "Administrators' Perceptions of Computer Usage in Education" in Annual Meeting of the Assocation of Educational Communications and Technology (Dallas, TX, January 20-24, 1984). Washington, DC: Association for Educational Communications and Technology, Jan. 20, 1984.

Christie, Betti J. and Dolan, Dan, "Montana's Task Force on Computer Education," Technological Horizons in Education, vol. 10, no. 2, November 1982, pp. 91-92.

Cicchelli, Terry and Baecher, Richard, "Introducing Microcomputers into the Classroom: A Study of Teacher's Concerns," Journal of Educational Computing Research, vol. 1, no. 1, January 1985, pp. 55-65.

Classroom Computer News, "Pennsylvania: Improving Schools through Technology," Classroom Computer News, vol. 3, no. 5, April 1983, p. 25.

Clay, Katherine ed. , Microcomputers in Education: A Handbook of Resources (Preface by LeRoy Finkel). Phoenix, AZ: Oryx Press, 1982.

Crist-Whitzel, Janet L. *et al.*, "Patterns of Implementing a District Computerized Instructional Management System," *Far West Lab. for Educational Research and Development* [San Francisco, CA], April 1986.

Ewald, William R. Jr., *Information, Perception and Regional Policy* (In support of the National Science Foundation, Research Applied to National Needs). Washington, DC: American Society of Landscape Architects Foundation, 1975.

Fahy, Patrick J., "Instructor Attitudes Affecting Adoption of Instructional Innovations," *AEDS Journal*, vol. 19, no. 1, Fall 1985, pp. 66-79.

Fullan, Michael, "Change Processes and Strategies at the Local Level" in *National Institute of Education Conference on State and Local Policy Implications of Effective School Research*. Washington, DC: Dingle Associates, Inc., June 1983.

Georgia State Department of Education, *Educational Technology: Local Planning Guide*. Atlanta, GA: Georgia State Department of Education, 1985.

Gibbons, L., "Escape or Run?," *Journal of Computer Assisted Learning*, vol. 2, no. 1, Mar-Apr 1986, pp. 22-27.

Goldhor, Richard S. and Lund, Robert T., *University-to Industry Technology Transfer: A Case Study in Advanced Technology*. Cambridge, MA: MIT Center for Policy Alternatives, November 1981.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," *European Journal of Education*, vol. 17, no. 4, 1982, pp. 339-53.

Gray, Peter J., "Policy Analysis: A Tool for Setting District Computer Use Policy. Paper and Report Series No. 97," *Northwest Regional Educational Laboratory* [Portland, OR], May 1984.

Greenfield, Patricia Marks, *Mind and Media: The Effects of Television, Video Games, and Computers*. Cambridge, MA: Harvard University Press, 1984.

Harvard University, Educational Technology Center, *Teacher as Learner: The Impact of Technology*. Cambridge, MA: Harvard University, Educational Technology Center, May 1986.

Hershey, Jacqueline A., "How Schools Sabotage a Creative Work Force: The Meaningless Repetition that is found even in Award-winning Schools is Driving Children away from Math and the Sciences. America Can't Afford that.," *Business Week* (Industrial Edition), July 13, 1987, p. 16.

Heuston, Dustin H., *An English Teacher's Conversion to Technology*. Orem, UT: WICAT Systems, Inc., undated.

Heuston, Dustin H., "Some of the Critical Issues in Introducing Computer Technology into Schools," WICAT, Inc. [Orem, UT], January 1985.

Heuston, Dustin H., The Future of Education: A Time of Hope and New Delivery Systems. Orem, UT: WICAT, Inc., 1986.

Hollomon, J. Herbert, Heaton, George R., et al., Government Involvement in the Innovation Process: Policy Implications (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

Institute for Educational Leadership, Technology and Education: Policy, Implementation, Evaluation (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership, 1981.

Isherwood, Geoffrey B., "The Principal and the Pauper: Administrator Training in Computer Technology," Education Canada, vol. 25, no. 4, Winter 1985, pp. 4-9.

Jones, H. Ralph, Constraints to the Development and Marketing of Medical Electronic Equipment. Ann Arbor: University of Michigan, Institute of Science and Technology, 1969.

Jorde, Paula, "Computer Technology in the Educational Setting: The Role of Administrators in the Innovation Decision Process" in World Assembly of the International Council on Education for Teaching (32nd, Vancouver, British Columbia, Canada, July 22-26, 1985). Washington, DC: International Council on Education for Teaching, July 1985.

Judd, Wallace, "A Teacher's Place in the Computer Curriculum," Phi Delta Kappan, vol. 65, no. 2, October 1983, pp. 120-22.

Kahn, Sharon, "Very Good," Venture, vol. 8, no. 9, September 1986, pp. 50-59.

Katz, Elihu and Lazarsfeld, Paul F., Personal Influence: The Part Played by People in the Flow of Mass Communications. New York: The Free Press, 1955.

Klier, Betje ed. , Technology and the Longer View. Proceedings of the Annual National Conference on Technology and Education (1st, Ft. Worth, TX, April 19-20, 1984). Ft. Worth, TX: Tandy Corp., Radio Shack Education Division, April 1984.

Kotler, Philip and Dubois, Bernard, "Education Problems and Marketing" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Lauterbach, Roland, "Preparing for Change -- Anticipating New Information Technology in German Primary Education," Programmed Learning and Educational Technology, vol. 23, no. 4, November 1986, pp. 337-45.

Leonard, Janet, Computers in Language and Literacy Work. London (England): Adult Literacy and Basic Skills Unit, Inner London Education Authority, September 1985.

Lewis, R., "Teachers, Pupils and Microcomputers," Technological Horizons in Education, vol. 10, no. 4, February 1983, pp. 81-87.

Linn, M. C. and Fisher, C. W., "The Gap between Promise and Reality in Computer Education: Planning a Response" in Making Our Schools More Effective: Proceedings of Three State Conferences. Alexandria, VA: ERIC Document Reproduction Service, June 1984.

Loucks-Horsley, Susan et al., The Role of Teacher Incentives and Rewards in Implementing a Technological Innovation. Final Report. Cambridge, MA: Bolt, Beranek and Newman, Inc., March 1985.

Maddux, Cleborne D., "Educational Microcomputing: The Need for Research," Computers in the Schools, vol. 1, no. 1, Spring 1984, pp. 35-41.

Marshall, David, "Computer Technology in Education: Redefining the Modes of Educational Transmission" in Regional Conference of Commonwealth Council for Educational Administration (5th, New Delhi, India, January 5-7, 1984; keynote address). Alexandria, VA: ERIC Document Reproduction Service, January 1984.

Masland, Andrew T., "Academic Computing as Technological Innovation" in Annual Meeting of the American Educational Research Association (New Orleans, LA, April 23-27, 1984). Washington, DC: American Educational Research Association, April 1984.

McKenzie, John ed. , Interactive Computer Graphics in Science Teaching. New York: Halstead Press (John Wiley & Sons), 1978.

McMeen, George R., "The Impact of Technological Change on Education," Educational Technology, vol. 26, no. 2, February 1986, pp. 42-45.

Meister, Gail R. and Levin, Henry, "Successful Integration of Microcomputers in an Elementary School," Stanford University, Center for Educational Research (IREFG) [Menlo Park, CA], May 1984.

Melmed, Arthur S., "The Technology of American Education: Problem and Opportunity," Technological Horizons in Education, vol. 14, no. 2, September 1986, pp. 77-81.

Murnane, Richard J. and Nelson, Richard R., "Production and Innovation When Techniques are Tacit," Journal of Economic Behavior and Organization, vol. 5, 1984, pp. 353-373.

National School Boards Association, New Technologies: Key to More Productive Schools. Alexandria, VA: National School Boards Association, 1985.

New York State Education Dept., Center for Learning Technologies, Survey of Computer Use, Spring 1983 and Microcomputer Use in New York State Public Schools, Total State, Fall 1984. Albany, NY: New York State Education Dept., Center for Learning Technologies, 1984.

Norris, Cathleen M. and Lumsden, Barry, "Functional Distance in the Attitudes of Educators Towards Computers," Technological Horizons in Education, vol. 11, no. 4, January 1984, pp. 129-32.

OECD, Centre for Educational Research and Innovation, International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

Olson, John and Eaton, Sandra, Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education, 1986.

Oregon University, Center for Advanced Technology in Education, The Computer: Extension of the Human Mind III. Proceedings of the Annual Summer Computer Conference (3rd, Eugene, Oregon, August 1-3, 1984). Eugene, OR: Oregon University, Center for Advanced Technology in Education, August 1984.

Pantiel, Mindy and Peterson, Becky, "Are Your Teachers Ready for Computers?," Principal, vol. 64, no. 4, March 1985, pp. 44-46.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Priest, W. Curtiss, "CPA's Bibliographic Management System: An Illustration of Market Push and Technology Pull," Center for Policy Alternatives, MIT [Cambridge, MA], Spring 1982, p. 9.

Reinhold, Fran and Corkett, Kay, "EL's Fifth Annual Survey of the States: Mandates -- yes, no, maybe, Though the Number of States Requiring Some Form of Computer Education has Jumped, State-level Involvement is Increasingly Taking the Form of Support for District Programs," Electronic Learning, October 1985, pp. 25-31.

Reinhold, Fran, "Electronic Learning's 1986 Annual Survey of the States: Computing in America, Computer Use in Schools has Solid State-level Support and Use is Settling into District Trends," Electronic Learning, October 1986, pp. 26-34.

Rich, Don, "Partnerships Take a New Turn," VocEd, vol. 58, no. 4, May 1983, pp. 32-33.

Rogers, Everett M. and Shoemaker, F. Floyd, Communication of Innovations: A Cross-Cultural Approach. London: Collier-MacMillan Publishers, 1971.

Rogers, Everett M. *et al*., *Microcomputers in the Schools: A Case of Decentralized Diffusion*. Menlo Park, CA: Stanford University, Calif. Inst. for Communication Research, April 1985.

Ryan, William C. ed. , *Proceedings of NECC '86, the National Educational Computing Conference* (7th, San Diego, California, June 4-6, 1986). Eugene, OR: International Council on Computers in Education, June 1986.

Shavelson, Richard J., Winkler, John D., Stasz, Cathleen, Feibel, Werner, Robyn, Abby E., and Shaha, Steven, *Teaching Mathematics and Science: Patterns of Microcomputer Use*. Santa Monica, CA: Rand Corporation, March 1984.

Sheth, Jagdish N., Wright, Peter L., eds. , *Marketing Analysis for Societal Problems* (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Signer, Barbara, "How the Literature and a Research Study Agree on CAI Innovation Success and Failure," *School Science and Mathematics*, vol. 83, no. 4, April 1983, pp. 307-17.

Smith, Frank, ""The Promise and Threat of Microcomputers for Language Learners" in On TESOL '83. The Question of Control. Annual Convention of Teachers of English to Speakers of Other Languages (Edited by Jean Handscombe, 17th, Toronto, Canada, March 15-20, 1983)," *ERIC Document Reproduction Service* [Alexandria, VA], March 1983.

Terry, Patricia *et al*., "Implementation of a District Computerized Instructional Management System: Barriers and Facilitators," *Far West Laboratory for Educational Research and Development* [San Francisco, CA], April 1986.

Tucker, Nancy G., "A Head Start in Computer Technology: How Release Time for Teachers Can Give Students an Advantage," *ERIC Document Reproduction Service* [Alexandria, VA], 1985.

Ulmer, Dale, "Interactive Video Changed My Classroom," *Vocational Education Journal*, vol. 61, no. 6, September 1986, pp. 34-36.

U.S. Congress, Committee on Ways and Means, *Computer Contribution Act of 1983. Hearing before the Subcommittee on Select Revenue Measures of the Committee on Ways and Means. House of Representatives, Ninety-Eighth Congress, First Session, on H.R. 701* (San Francisco, CA). Washington, DC: U.S. Congress, Committee on Ways and Means, Nov. 11, 1983.

Utsumi, Seiji, "The Videodisc: Its Possibility as an Educational Media," *Journal of Science and Mathematics Education in Southeast Asia*, vol. 6, no. 1, July 1983, pp. 41-46.

Valesky, Thomas C. *et al*., "Evaluating Software: Administrators Need Help, Too," *Technological Horizons in Education*, vol. 14, no. 4, November 1986, pp. 68-71.

Selected References on

Intangibility

Boulding, Kenneth E., "The Economics of Knowledge and the Knowledge of Economics" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Gordon, Wendy J., "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," Columbia Law Review, vol. 82, 1982, pp. 1600-1657.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

Hindle, Anthony and Raper, Diane, "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1976.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Murnane, Richard J. and Nelson, Richard R., "Production and Innovation When Techniques are Tacit," Journal of Economic Behavior and Organization, vol. 5, 1984, pp. 353-373.

Priest, W. Curtiss, The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Selected References on

Leadership

Anandam, Kamala, "Technology for Education: Promises and Problems," *New Directions for Community Colleges*, vol. 14, no. 3, Fall 1986, pp. 65-72.

Association for the Development of Computer-based Instructional Systems, *ADCIS Conference Proceedings* (27th, New Orleans, Louisiana, February 3-6, 1986). Bellingham, WA: Association for the Development of Computer-based Instructional Systems, February 1986.

Blair, Marjorie and Lobello, Sharon, "People Shaping Educational Computing," *Electronic Education*, vol. 3, no. 8, May-June 1984, pp. 14-16+.

Bork, Alfred, *Learning with Computers*. Bedford, MA: Digital Press, 1981.

Bork, Alfred, "The Fourth Revolution -- Computers and Learning" in *The Computer: Extension of the Human Mind. Proceedings, Annual Summer Conference* (3rd, Eugene, OR, July 21-23, 1982). Eugene, OR: University of Oregon, College of Education, July 1982.

Braden, Roberts A., "Instructional Design: Technology at Risk (Commentary on the National Task Force on Educational Technology)," *Educational Technology*, vol. 26, no. 10, October 1986, pp. 33-34.

Branscomb, Lewis M., "Insights: Technology Promotion: What the Fed Should and Should Not Do," *High Technology*, vol. 5, no. 5, May 1985, pp. 11,14.

Brodinsky, Ben, *Improving Math & Science Education: Problems & Solutions. AASA Critical Issues Report*. Arlington, VA: American Association of School Administrators, 1985.

Carnine, Doug *et al.*, *The Role of Technology in School Improvement. A Presenter's Guide. Research Based Training for School Administrators*. Eugene, OR: Oregon University, Center for Educational Policy and Management, 1984.

Curry, B., *State Leadership Assistance for Technology in Education* (Project SLATE). Falls Church, VA: Education Turnkey Systems, Inc., September 1984.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Educational Research Service, ERS School Research Forum, Education for a High Technology Future: The Debate over the Best Curriculum. Arlington, VA: Educational Research Service, ERS School Research Forum, 1983.

Educational Technology, "Technically Speaking.... An Occasional Column of Editorial Opinion. Yes, There Really is an Education Market for Technology," Educational Technology, vol. 26, no. 2, February 1986, p. 8.

Florida State Dept. of Education. Office of Educational Technology, Florida Computing Activities, 1986. Tallahassee, FL: Florida State Dept. of Education. Office of Educational Technology, 1986.

Fox, Wendy, "Kennedy asks $100m for 'Star Schools' (National program to use satellites to link students with one professor via two-way television)," Boston Globe, March 1986, p. 21.

Gardner, David Pierpont, "The Charge of the Byte Brigade: Educators Lead the Fourth Revolution," Educational Record, vol. 67, no. 1, Winter 1986, pp. 10-15.

Glatthorn, Allan A., Curriculum Renewal (Manual for educators to use in curriculum planning and development). Alexandria, VA: Association for Supervision and Curriculum Development, 1987.

Hansen, Kenneth H., "Megatrends in American Society: Policy Issues for State Education Agencies. An Issues Analysis Paper.," Northwest Regional Education Laboratory [Portland, OR], June 1983.

Heuston, Dustin H., An English Teacher's Conversion to Technology. Orem, UT: WICAT Systems, Inc., undated.

Heuston, Dustin H., The Future of Education: A Time of Hope and New Delivery Systems. Orem, UT: WICAT, Inc., 1986.

International Council for Computers in Education, ICCE Policy Statement on Network and Multiple Machine Software. Eugene, OR: International Council for Computers in Education, 1985.

Johnston, Jerome, "Computers and the Schools: The Next Decade," University of Michigan, Inst. for Social Research [Ann Arbor, MI], March 1985.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," Harvard University, Educational Technology Center [Cambridge, MA], Feb. 6, 1984.

Kahin, Brian, "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ], 1986.

Klier, Betje ed. , Technology and the Longer View. Proceedings of the Annual National Conference on Technology and Education (1st, Ft. Worth, TX, April 19-20, 1984). Ft. Worth, TX: Tandy Corp., Radio Shack Education Division, April 1984.

Lewis, Geoff, "Looking at the Big Picture in the Information Age (Sam Nunn and Frank R. Lautenberg's bill for a 23-member Information Age Commission)," Business Week (Industrial Edition), Oct. 13, 1986, p. 158C.

McKenzie, Floretta Dukes, "Leadership: The Critical Variable" in Annual Meeting of the Florida Association of School Administrators (Orlando, FL, June 16, 1985). Orlando: Florida Association of School Administrators, June 16, 1985.

Mecklenburger, James A., Blom, Don E., and Williams, Cheryl S., "Insider's Letter," National School Boards Assoc., Inst. for the Transfer of Tecnology to Education [Alexandria, VA], vol. 2, no. 3, June 1987.

Micro-Ideas, Proceedings of the Annual Conference on "The Role of the Computer in Education" (5th, Arlington Heights, Illinois, February 20-22, 1985). Glenview, IL: Micro-Ideas, February 1985.

Moursund, David, "The Two Percent Solution -- Funding for Use of Computers," NASSP Bulletin, vol. 68, no. 472, May 1984, pp. 49-54.

Moursund, David, The Computer Coordinator (Computer coordinator responsibilities and necessary qualifications). Eugene, OR: International Council for Computers in Education, 1985.

Moursund, David, High Tech / High Touch: A Computer Education Leadership Development Workshop. Second Edition. Eugene, OR: International Council for Computers in Education, September 1985.

Murphy, Brian, "Tom Snyder: Interview," InCider, vol. 2, no. 6, June 1984, pp. 42-44+.

National Governors' Association Center for Policy Research and Analysis, Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

National Governors' Association, Results in Education: 1987. The Governors' 1991 Report on Education. Washington, DC: National Governors' Association, 1987.

National School Boards Association, New Technologies: Key to More Productive Schools. Alexandria, VA: National School Boards Association, 1985.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

New York State Education Dept., Center for Learning Technologies, Survey of Computer Use, Spring 1983 and Microcomputer Use in New York State Public Schools, Total State, Fall 1984. Albany, NY: New York State Education Dept., Center for Learning Technologies, 1984.

Norris, William C., "Improving Education Through Technological Innovation," Technological Horizons in Education, vol. 12, no. 10, June 1985, pp. 65-68.

OECD, Centre for Educational Research and Innovation, International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

OECD, Center for Research and Innovation in Education, Information Technologies and Basic Learning. International Conference of National Representatives and Experts (Paris, 13th-15th October 1986). Paris: OECD, Center for Research and Innovation in Education, October 1986.

Oregon University, Center for Advanced Technology in Education, The Computer: Extension of the Human Mind III. Proceedings of the Annual Summer Computer Conference (3rd, Eugene, Oregon, August 1-3, 1984). Eugene, OR: Oregon University, Center for Advanced Technology in Education, August 1984.

Papert, Seymour, "New Views on LOGO (Seymour Papert, father of the Logo computer language, talks about his ideas for improving it)," Electronic Learning, April 1986, pp. 33-36+.

Perelman, Lewis J., Technology and Transformation of Schools: Public Education Strategies for a More Competitive Nation. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Ridley, William J. and Hull, Mcallister H. Jr., Transforming American Education: Reducing the Risk to the Nation. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Robinson, Louis, "The University-Industry Relationship," Perspectives on Computing, vol. 3, no. 1, March 1983, pp. 4-15.

Roblyer, M. D. ed. , Abstract Proceedings of the Florida Instructional Computing Conference (Orlando, Florida, January 21-24, 1986). Tallahassee, FL: Florida State Dept. of Education. Office of Educational Technology, January 1986.

Ryan, William C. ed. , Proceedings of NECC '86, the National Educational Computing Conference (7th, San Diego, California, June 4-6, 1986). Eugene, OR: International Council on Computers in Education, June 1986.

Sniderman, Ron, *Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report*. Wayne, MI: Wayne County Intermediate School District, undated.

Spann, Milton G., Jr. and Thompson, Cynthia G., *The National Directofy of Exemplary Programs in Developmental Education. Second Edition*. Boone, NC: Appalachian State Univ.; National Center for Developmental Education, 1986.

Steier, Lloyd P., "Computer Technology and Education: A Policy Delphi" in *Annual Meetings of the American Educational Research Association* (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, April 18, 1986.

Stonier, Tom and Conlin, Cathy, *The Three Cs: Children, Computers, and Communication*. New York: John Wiley & Sons, 1985.

Sullivan, Edmund V., "Computers, Culture, and Educational Futures -- A Meditation on 'Mindstorms'," *Interchange*, vol. 16, no. 3, Fall 1985, pp. 1-18.

U.S. Congress, Committee on Education and Labor, House of Representatives, *Hearing on Computer Education. Hearing before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eigth Congress, Second Session, on H.R. 3750, H.R. 1134, and H.R. 4628*. Washington, DC: U.S. Congress, Committee on Education and Labor, House of Representatives, 1984.

U.S. Congress, House Committee on Education and Labor, *Oversight on Educational Technology. Joint Hearing before the Subcommittee on Select Education of the Committee on Education and Labor. House of Representatives, Ninety-Seventh Congress, Second Session*. Washington, DC: U.S. Congress, House Committee on Education and Labor, Sept. 14, 1982.

U.S. Congress, House Committee on Science and Technology, *The Computer Literacy Act, H.R. 3750 and the National Educational Software Act, H.R. 4628. Hearing before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, House of Representatives, Ninety-Eighth Congress, Second Session*. Washington, DC: U.S. Congress, House Committee on Science and Technology, no. 107, June 5, 1984.

U.S. Congress, House Committee on Education and Labor, *The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145*. Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

U.S. Congress, Library of Congress, Congressional Research Service, *The Congress and Information. Staff Report prepared for the use of the Select Committee on Committees, U.S. House of Representatives by the Science Research Division, Congressional Research Service, Library of*

Congress. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, May 5, 1974.

U.S. Congress, Library of Congress, Congressional Research Service, Information Technology in Education: Perspectives and Potentials. Report prepared for the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, U.S. House of Representatives, Ninety-Sixth Congress, Second Session, Serial QQQ. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, December 1980.

U.S. Congress, Office of Technology Assessment, Information Technology R&D: Critical Trends and Issues. Washington, DC: U.S. Congress, Office of Technology Assessment, February 1985.

Virginia Community College System, Sterling. Inst. for Instructional Excellence, Catalog of Exemplary Projects, 1985-86. Sterling, VA: Virginia Community College System, Sterling. Inst. for Instructional Excellence, 1986.

Waggoner, Michael D. and Goldberg, Albert L., "A Forecast for Technology and Education: The Report of A Computer Conferencing Delphi," Educational Technology, vol. 26, no. 6, June 1986, pp. 7-14.

Walker, Decker F., "Reflections on the Educational Potential and Limitations of Microcomputers," Phi Delta Kappan, vol. 65, no. 2, October 1983, pp. 103-07.

Watt, Dan, "Educational Computing: The Wired Classroom," Popular Computing, vol. 2, no. 8, June 1983, p. 70+.

Watt, Dan, "Games Designed for Learning," Popular Computing, vol. 2, no. 9, July 1983, pp. 65-67.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al., Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

White, Mary Alice, "The Electronic Learning Revolution: Questions We Should Be Asking," Quarterly Review of Education, vol. 14, no. 1, Spring 1984, pp. 23-33.

White, Mary Alice, "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21, 1985.

White, Mary Alice, "First Reply: For a Less Narrow Conception of Learning," Prospects: Quarterly Review of Education, vol. 15, no. 4, Winter 1985, pp. 513-14.

Selected References on

Library Service

Casper, Cheryl A., "Economic Pricing Models and Their Application to Library Services" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Classroom Computer News, "Pennsylvania: Improving Schools through Technology," Classroom Computer News, vol. 3, no. 5, April 1983, p. 25.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Dagnese, Joseph M., "The Time of the Parenthesis: Moving Toward the Future," Special Libraries, vol. 75, no. 2, April 1984, pp. 155-63.

Hindle, Anthony and Raper, Diane, "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1976.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," Harvard University, Educational Technology Center [Cambridge, MA], Feb. 6, 1984.

Myers, Charles A., Computers in Knowledge-Based Fields. Cambridge, MA: MIT Press, 1970.

Neff, Raymond K., "Merging Libraries and Computer Centers: Manifest Destiny or Manifestly Deranged? An Academic Services Perspective," EDUCOM Bulletin, vol. 20, no. 4, Winter 1985, pp. 8-12.

Park, Chung I., "Transforming Librarians," COINT Reports, AD Digest [Morton Grove, IL], vol. 5, no. 5, 1984.

U.S. Library of Congress Network Advisory Committee, Public/Private Sector Interactions: The Implications for Networking. Washington, DC: U.S. Library of Congress Network Advisory Committee, 1984.

Weingarten, Fred W., Adler, Prudence S., Garcia, Dorothy Linda, Roberts, Linda G., et al., Informational Technology and Its Impact on American Education. Washington, DC: U.S. Congress, Office of Technology Assessment, 1981.

Selected References on Licensing

Cropp, J. A. D., Harris, D. C., and Stern, E. S., *Trade in Innovation: The Ins and Outs of Licensing*. London: Wiley - Interscience, John Wiley & Sons Ltd, 1970.

Katz, Michael L. and Shapiro, Carl, "R&D Rivalry with Licensing or Imitation," *The American Economic Review*, vol. 77, no. 3, June 1987, pp. 402-420.

Sprung, J.P., "The Business of Software Licensing at the University of Waterloo," *Journal of the Society of Research Administrators*, vol. 15, no. 2, Fall 1983, pp. 5-18.

Selected References on

Local Role

Educational Technology, "Technically Speaking.... An Occasional Column of Editorial Opinion. Yes, There Really is an Education Market for Technology," Educational Technology, vol. 26, no. 2, February 1986, p. 8.

Ewald, William R. Jr., Information, Perception and Regional Policy (In support of the National Science Foundation, Research Applied to National Needs). Washington, DC: American Society of Landscape Architects Foundation, 1975.

National School Boards Association, New Technologies: Key to More Productive Schools. Alexandria, VA: National School Boards Association, 1985.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Ridley, William J. and Hull, Mcallister H. Jr., Transforming American Education: Reducing the Risk to the Nation. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Scandura, Joseph M., "An Analysis of the Federal Role in Instructional Technology in the Era of the New Federalism" in Annual Meeting of the American Educational Research Association (Montreal, Canada, April 14, 1983). Washington, DC: American Educational Research Association, April 14, 1983.

Sniderman, Ron, Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report. Wayne, MI: Wayne County Intermediate School District, undated.

Selected References on

Marginal Cost Pricing

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in *Economics of Information and Knowledge* (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Back, Frank E., *Economics: An Introduction to Analysis and Policy*. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Baumol, William J. and Ordover, Janusz A., *On the Optimality of Public-Goods Pricing with Exclusion Devices*. New York: New York University Department of Economics, Center for Applied Economics, November 1975.

Besen, Stanley M., *The Effect of Reproduction Technology on Intellectual Property*. Cambridge, MA: MIT Research Program on Communications Policy, March 22, 1984.

Braunstein, Yale M., *An Economic Rationale for Page and Submission Charges by Academic Journals*. New York: New York University Department of Economics, Center for Applied Economics, August 1975.

Braunstein, Yale M., "The Functioning of Information Markets" in *Issues in Information Policy* (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Herber, Bernard P., *Modern Public Finance: The Study of Public Sector Economics*. Homewood, IL: Richard D. Irwin, Inc., 1971.

Keiser, Norman F., *Economics: Analysis and Policy*. New York: John Wiley & Sons, Inc., 1965.

Machlup, Fritz, *Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital*. Princeton: Princeton University Press, 1984.

Pogue, Thomas F. and Sgontz, L. G., *Government and Economic Choice: An Introduction to Public Finance*. Boston: Houghton Mifflin Company, 1978.

Samuelson, Paul A., *Economics* (Ninth Edition). New York: McGraw-Hill Book Company, 1973.

Singer, Neil M., *Public Microeconomics*. Boston: Little, Brown and Company, 1972.

Selected References on

Market Failure

Bator, Francis M., "The Anatomy of Market Failure," The Quarterly Journal of Economics, vol. 72, August 1958, pp. 351-379.

Canter, Marc, Important Issues Affecting the Educational Marketplace. Chicago, IL: MacroMind, Inc., 1986.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, et al., Government Policy, Technological Innovation, and Alternative Energy. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Jones, H. Ralph, Constraints to the Development and Marketing of Medical Electronic Equipment. Ann Arbor: University of Michigan, Institute of Science and Technology, 1969.

Kahin, Brian, "Dissemination of Software in Higher Education," EDUCOM Software Initiative [Princeton, NJ], 1986.

Kotler, Philip and Dubois, Bernard, "Education Problems and Marketing" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Nelson, Richard R., "Roles of Government in a Mixed Economy," Journal of Policy Analysis and Management, vol. 6, no. 4, Summer 1987, pp. 541-557.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Priest, W. Curtiss, The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Sheth, Jagdish N., Wright, Peter L., eds. , Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Tassey, Gregory, "Infratechnologies and the Role of Government," Technological Forecasting and Social Change, vol. 21, 1982, pp. 163-180.

Texas House of Representatives, House Study Group, The Texas Textbook Controversy. House Study Group Special Legislative Report. Austin, TX: Texas House of Representatives, House Study Group, May 9, 1984.

Selected References on Market Structure

Braunstein, Yale M., "The Functioning of Information Markets" in *Issues in Information Policy* (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Cooper, Michael D., "The Structure and Future of the Information Economy," *Information Processing & Management*, vol. 19, no. 1, 1983, pp. 9-26.

Dertouzos, James N. and Wildman, Steven S., "A Study of Economic Issues in the Recording Industry" in *Copyright Issues: Cable Television and Performance Rights* (Serial No. 28). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, August 1981, pp. 699-778.

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang, *New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors* (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October 1984.

Gordon, Wendy J., "Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and its Predecessors," *Columbia Law Review*, vol. 82, 1982, pp. 1600-1657.

Hill, Christopher T., Roessner, J. David, Priest, W. Curtiss, *et al.*, *Government Policy, Technological Innovation, and Alternative Energy*. Cambridge, MA: MIT Center for Policy Alternatives (with the Solar Energy Res. Institute), June 1980.

Institute for Educational Leadership, *Technology and Education: Policy, Implementation, Evaluation* (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership, 1981.

Kamien, Morton I. and Schwartz, Nacy L., *Market Structure and Innovation*. New York: Cambridge University Press, 1982.

Ladd, David, "Statement of David Ladd, Register of Copyrights and Assistant Librarian of Congress for Copyright Services" in *Copyright/Cable Television* (Part 1, Serial No. 44). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, 1982, pp. 900-981.

Machlup, Fritz, *The Production and Distribution of Knowledge in the United States*. Princeton: Princeton University Press, 1962.

Nelson, Richard R. and Winter, Sidney G., "In Search of Useful Theory of Innovation," *Research Policy*, vol. 6, 1977, pp. 36-76.

Porat, Marc Uri, *The Information Economy: Definition and Measurement*. Washington, DC: U.S. Department of Commerce, Office of Telecommunications, 1977.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Toulmin, H. A., Jr., *Patents and the Public Interest*. New York: Harper & Brothers Publishers, 1939.

Selected References on Marketing

Burger, Michael L., "Authoring Languages/Systems Comparisons," *AEDS Journal*, vol. 19, no. 2, Win-Spr 1986, pp. 190-209.

Cohen, Mollie L., "Computer Corner (How social studies teacher successfully marketed own tutorial programs)," *Social Education*, vol. 47, no. 6, October 1983, pp. 456-59.

Jones, H. Ralph, *Constraints to the Development and Marketing of Medical Electronic Equipment*. Ann Arbor: University of Michigan, Institute of Science and Technology, 1969.

Kelley, ~~Albert J.,~~ Campanella, Frank B., and McKiernan, John, *Venture Capital: A Guidebook for New Enterprises*. Chestnut Hill, MA: Boston College, School of Management, Management Institute, July 1971.

Kotler, Philip and Dubois, Bernard, "Education Problems and Marketing" in *Marketing Analysis for Societal Problems* (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Langenscheidt, Florian and Putnam, Constance, "A Publisher's Perspective on Software Development," *Unterrichtspraxis*, vol. 17, no. 1, Spring 1984, pp. 56-65.

Savitsky, David, "A Publisher's Guidelines for Educational Software Development," *Educational Technology*, vol. 24, no. 4, April 1984, p. 45.

Sheth, Jagdish N., Wright, Peter L., eds. , *Marketing Analysis for Societal Problems* (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Selected References on Measurement Of Innovation

Harmon, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D., *Technological Innovation by Firms: Data Appendixes on Computers and Machine Tools*. Santa Monica, CA: Rand Corporation, November 1977.

Harman, Alvin J., Alexander, Arthur J., Davis, Malcolm R., and Lee, Allen D., *Technological Innovation by Firms: Enhancement of Product Quality*. Santa Monica, CA: Rand Corporation, November 1977.

IFO - Institut fur Wirtschaftsforschung, *IFO Investment Test* (Survey of Innovation in Firms). Munchen, Germany: IFO - Institut fur Wirtschaftsforschung, 1980.

Priest, W. Curtiss and Hill, Christopher T., *Identifying and Assessing Discrete Technological Innovations: An Approach to Output Indicators* (Prepared for the National Science Foundation, Division of Science Resource Studies). Lexington, MA: Center for Information Technology and Society, August 1980.

Selected References on

Microworld Software

Craighead, Donna, Bitter, Gary G., eds. , The Best of the Proceedings 1982-1984: Microcomputers in Education Conference. Rockville, MD: Computer Science Press, 1984.

McDonald, Joseph P., "Microworlds and Expert Systems: Is it Either or Can it be Both? Report of a Conference Sponsored by the Educational Technology Center (Cambridge, MA, January 11-12, 1985)," Harvard University, Educational Technology Center [Cambridge, MA], January 1985.

Papert, Seymour, Mindstorms. New York: Basic Books, 1980.

Papert, Seymour, "New Views on LOGO (Seymour Papert, father of the Logo computer language, talks about his ideas for improving it)," Electronic Learning, April 1986, pp. 33-36+.

Selected References on

Monopoly

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Back, Frank E., Economics: An Introduction to Analysis and Policy. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Braunstein, Yale M., "The Functioning of Information Markets" in Issues in Information Policy (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Casper, Cheryl A., "Economic Pricing Models and Their Application to Library Services" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Herber, Bernard P., Modern Public Finance: The Study of Public Sector Economics. Homewood, IL: Richard D. Irwin, Inc., 1971.

Keiser, Norman F., Economics: Analysis and Policy. New York: John Wiley & Sons, Inc., 1965.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Pethig, Rudiger, "On the Production and Distribution of Information," Zeitschrift fur Nationalokonomie (Journal of Economics), vol. 43, no. 4, 1983, pp. 383-403.

Pogue, Thomas F. and Sgontz, L. G., Government and Economic Choice: An Introduction to Public Finance. Boston: Houghton Mifflin Company, 1978.

Priest, W. Curtiss and Kahin, Brian, "Economics of Copyright" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, November 5, 1984.

Samuelson, Paul A., Economics (Ninth Edition). New York: McGraw-Hill Book Company, 1973.

Singer, Neil M., Public Microeconomics. Boston: Little, Brown and Company, 1972.

Toulmin, H. A., Jr., *Patents and the Public Interest*. New York: Harper & Brothers Publishers, 1939.

U.S. National Commission on New Technological Uses of Copyrighted Works, *Final Report of the National Commission on New Technological Uses of Copyrighted Works* (CONTU Report). Washington, DC: U.S. National Commission on New Technological Uses of Copyrighted Works, 1979.

Selected References on

Networking

Alaska State Dept. of Education. Office of Educat. Tech. and Telecommunication, "The Feasibility of Computer Networking in Education. A Study Submitted to the Thirteenth Session of the Alaska State Legislature," Alaska State Dept. of Education. Office of Educat. Tech. and Telecommunication [Juneau, AK], January 1983.

Brown, George W., Miller, James G., and Keenan, Thomas A., Edunet: Report of the Summer Study on Information Networks. New York: John Wiley & Sons, Inc., 1967.

Cahn, Dudley D., "Information Technology and Interpersonal Behavior: Impact on Supervisor-Subordinate and Teacher-Student Relationships" in Annual Meeting of the Eastern Communication Association (76th, Providence, RI, May 2-5, 1985). Alexandria, VA: ERIC Document Reproduction Service, May 1985.

Classroom Computer News, "Pennsylvania: Improving Schools through Technology," Classroom Computer News, vol. 3, no. 5, April 1983, p. 25.

Dreher, Heinz V., "Electronic Mail: An Exemplar of Computer Use in Education," Educational Technology, vol. 24, no. 8, August 1984, pp. 36-38.

Field, Anne R., "U.S. Publishers Want to Maximize the 'MINITEL' Potential," Business Week (Industral Edition), July 6, 1987, p. 86C.

Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp., "A Network for Teacher Support -- Report of the Commissioner's Task Force on Instructional Computing," Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp. [Tallahassee, FL], Feb. 10, 1986.

Fox, Wendy, "Kennedy asks $100m for 'Star Schools' (National program to use satellites to link students with one professor via two-way television)," Boston Globe, March 1986, p. 21.

Gusse, David R. and Lancaster, Kent M., "Using On-Line Services Makes Course More Realistic," Journalism Educator, vol. 38, no. 3, Autumn 1983, pp. 6-10.

Reynolds, Carl L., ""Enriching the Rural School Curriculum through Telecommunications" in Annual Meeting of the National Rural Teacher Education Conference (2nd, Bellingham, WA, October 8-10, 1986)," ERIC Document Reproduction Service [Alexandria, VA], October 1986.

Riccelli, C., "Broadcasting Software - Computer Users May Take Free Software From Radio," Inc. Magazine, vol. 7, no. 5, May 1985, p. 20.

Schooler, Douglas K., "Microcomputer Telecommunication: Bringing Education Online for an Expanded Classroom," ERIC Document Reproduction Service [Alexandria, VA], May 22, 1984.

Smith, Bev, "Addison-Wesley Launches Info Literacy Program: Customizes EasyNet for High School Market," Information Today, February 1987, pp. 1,39.

Smith, Frank, ""The Promise and Threat of Microcomputers for Language Learners" in On TESOL '83. The Question of Control. Annual Convention of Teachers of English to Speakers of Other Languages (Edited by Jean Handscombe, 17th, Toronto, Canada, March 15-20, 1983)," ERIC Document Reproduction Service [Alexandria, VA], March 1983.

U.S. Congress, Office of Technology Assessment, Information Technology R&D: Critical Trends and Issues. Washington, DC: U.S. Congress, Office of Technology Assessment, February 1985.

U.S. Library of Congress Network Advisory Committee, Public/Private Sector Interactions: The Implications for Networking. Washington, DC: U.S. Library of Congress Network Advisory Committee, 1984.

Waggoner, Michael D. and Goldberg, Albert L., "A Forecast for Technology and Education: The Report of A Computer Conferencing Delphi," Educational Technology, vol. 26, no. 6, June 1986, pp. 7-14.

Watt, Dan, "Educational Computing: The Wired Classroom," Popular Computing, vol. 2, no. 8, June 1983, p. 70+.

White, Mary Alice, "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21, 1985.

Selected References on

Networking For Software

Florida State Dept. of Education. Office of Educational Technology, Florida Computing Activities, 1986. Tallahassee, FL: Florida State Dept. of Education. Office of Educational Technology, 1986.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Riccelli, C., "Broadcasting Software - Computer Users May Take Free Software From Radio," Inc. Magazine, vol. 7, no. 5, May 1985, p. 20.

Selected References on

Non Depletability

Braunstein, Yale M., "Information as a Commodity," AAAS Meetings [Boston], February 1976.

Braunstein, Yale M., "The Functioning of Information Markets" in Issues in Information Policy (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Braunstein, Yale, "Information as a Commodity: Public Policy Issues and Recent Research" in Information Services: Economics, Management, and Technology (edited by Robert M. Mason and John E. Creps, Jr.). Boulder, CO: Westview Press, 1981.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Priest, W. Curtiss, "Characteristics of Information in Commerce and Transactions" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, October 25, 1984.

Priest, W. Curtiss, "Development of Economic Guidelines and Alternative Options for Public Investment and Disinvestment Decisions in Scientific and Technical Information" (Working Paper). Cambridge, MA: MIT Center for Policy Alternatives, March 15, 1984.

Priest, W. Curtiss, The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Selected References on

Nonprofit Failure

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

Pogrow, Stanley, *Education in the Computer Age: Issues of Policy, Practice, and Reform*. Beverly Hills, CA: Sage Publications, Inc., 1983.

Selected References on

Nonprofit Role

Ben-Ner, Avner, "Nonprofit Organizations: Why Do They Exist in Market Economies" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 94-113.

Easley, David and O'Hara, Maureen, "Optimal Nonprofit Firms" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986.

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

Institute for Educational Leadership, *Technology and Education: Policy, Implementation, Evaluation* (Proceedings of the National Conference on Technology and Education, January 26-28, 1981). Washington, DC: Institute for Educational Leadership, 1981.

Krashinsky, Michael, "Transaction Costs and a Theory of the Nonprofit Organization" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 113-142.

Mayer, R., Nicosia, F. M., and Middlebrook, S., *Technological Change, Product Proliferation and Consumer Decision Processess*. *Volume 4 -- Technology, the Consumer, and Information Flows*. Berkeley, CA: University of California, Graduate School of Business Administration, August 1974.

Priest, W. Curtiss, *The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property* (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Rose-Ackerman, Susan ed. , *The Economics of Nonprofit Institutions*. New York: Oxford University Press, 1986.

Young, Dennis R., "Entrepreneurship and the Behavior of Nonprofit Organizations: Elements of a Theory" in *The Economics of Nonprofit Institutions* (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 161-184.

Selected References on

Online Database

Field, Anne R., "U.S. Publishers Want to Maximize the 'MINITEL' Potential," Business Week (Industral Edition), July 6, 1987, p. 86C.

Gusse, David R. and Lancaster, Kent M., "Using On-Line Services Makes Course More Realistic," Journalism Educator, vol. 38, no. 3, Autumn 1983, pp. 6-10.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Schooler, Douglas K., "Microcomputer Telecommunication: Bringing Education Online for an Expanded Classroom," ERIC Document Reproduction Service [Alexandria, VA], May 22, 1984.

Smith, Bev, "Addison-Wesley Launches Info Literacy Program: Customizes EasyNet for High School Market," Information Today, February 1987, pp. 1,39.

Selected References on

Parent

Arons, Stephen, Compelling Belief: The Culture of American Schooling. Amerhest, MA: The University of Massachusetts Press, 1986.

Gorny, Peter, "New Information Technologies in Education in the Federal Republic of Germany," European Journal of Education, vol. 17, no. 4, 1982, pp. 339-53.

National Governors' Association, Results in Education: 1987. The Governors' 1991 Report on Education. Washington, DC: National Governors' Association, 1987.

Ridley, William J. and Hull, Mcallister H. Jr., Transforming American Education: Reducing the Risk to the Nation. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Sniderman, Ron, Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report. Wayne, MI: Wayne County Intermediate School District, undated.

Steier, Lloyd P., "Computer Technology and Education: A Policy Delphi" in Annual Meetings of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, April 18, 1986.

Stonier, Tom and Conlin, Cathy, The Three Cs: Children, Computers, and Communication. New York: John Wiley & Sons, 1985.

Watt, Dan, "Games Designed for Learning," Popular Computing, vol. 2, no. 9, July 1983, pp. 65-67.

Selected References on Pareto Optimality

Baumol, William J. and Ordover, Janusz A., On the Optimality of Public-Goods Pricing with Exclusion Devices. New York: New York University Department of Economics, Center for Applied Economics, November 1975.

Easley, David and O'Hara, Maureen, "Optimal Nonprofit Firms" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986.

Herber, Bernard P., Modern Public Finance: The Study of Public Sector Economics. Homewood, IL: Richard D. Irwin, Inc., 1971.

Machlup, Fritz, Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital. Princeton: Princeton University Press, 1984.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Pethig, Rudiger, "On the Production and Distribution of Information," Zeitschrift fur Nationalokonomie (Journal of Economics), vol. 43, no. 4, 1983, pp. 383-403.

Pogue, Thomas F. and Sgontz, L. G., Government and Economic Choice: An Introduction to Public Finance. Boston: Houghton Mifflin Company, 1978.

Singer, Neil M., Public Microeconomics. Boston: Little, Brown and Company, 1972.

Selected References on

Patent

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Cropp, J. A. D., Harris, D. C., and Stern, E. S., Trade in Innovation: The Ins and Outs of Licensing. London: Wiley - Interscience, John Wiley & Sons Ltd, 1970.

Dorfman, Nancy S., Giamporcaro, Matthew, and Lam, Jun-Tsiang, New vs. Established Enterprises: A Study of Innovation in Computers and Semiconductors (In support of the National Science Foundation, Divison of Policy, Research, and Analysis). Cambridge, MA: MIT Center for Policy Alternatives, October 1984.

Hollomon, J. Herbert, Heaton, George R., et al., Government Involvement in the Innovation Process: Policy Implications (A Report to the U.S. Congress, Office of Technology Assessment). Cambridge, MA: MIT Center for Policy Alternatives, May 31, 1978.

Mansfield, Edwin, Rapoport, John, Romeo, Anthony, Wagner, Samuel, and Beardsley, George, "Social and Private Rates of Return from Industrial Innovations," Quarterly Journal of Economics, vol. 91, May 1977, pp. 221-240.

Peyton, David Y., "The Creation of Information: Property Rights and Subsidies" in Issues in Information Policy (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 75-85.

Utterback, James M. and Murray, Albert E., The Influence of Defense Procurement and Sponsorship of Research and Development on the Development of the Civilian Electronics Industry. Cambridge, MA: MIT Center for Policy Alternatives, June 30, 1977.

Wilson, Andrew H., Governments and Innovation. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April 1973.

Selected References on

Patronage

Goulden, Joseph C., *The Money Givers: An Examination of the Myths and Realities of Foundation Philanthropy in America*. New York: Random House, 1971.

Haskell, Francis, *Patrons and Painters*. New York: Alfred A. Knopf, 1963.

Ladd, David, "Statement of David Ladd, Register of Copyrights and Assistant Librarian of Congress for Copyright Services" in *Copyright/Cable Television* (Part 1, Serial No. 44). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, 1982, pp. 900-981.

Larson, Gary O., *The Reluctant Patron: The United States Government and the Arts, 1943-1965*. Philadelphia: University of Pennsylvania Press, 1983.

Levine, Faye, *The Culture Barons*. New York: Thomas Y. Crowell Company, 1976.

Miller, Howard S., *Dollars for Research: Science and Its Patrons in Nineteenth-Century America*. Seattle: University of Washington Press, 1970.

Nielsen, Waldemar A., *The Big Foundations*. New York: Columbia University Press, 1972.

Priest, W. Curtiss, *The Character of Information: Characteristics and Properties of Information Related to Issues Concerning Intellectual Property* (In Support of the U.S. Congress, OTA, Project on Intellectual Property). Lexington, MA: Center for Information Technology and Society, Feb. 10, 1985.

Selected References on

Planning

Bozeman, William C., "Strategic Planning for Computer-Based Educational Technology," *Educational Technology*, vol. 24, no. 5, May 1984, pp. 23-27.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp., "A Network for Teacher Support -- Report of the Commissioner's Task Force on Instructional Computing," *Florida State Dept. of Education; Commissioner's Task Force on Instruct. Comp.* [Tallahassee, FL], Feb. 10, 1986.

Fullan, Michael, "Change Processes and Strategies at the Local Level" in *National Institute of Education Conference on State and Local Policy Implications of Effective School Research*. Washington, DC: Dingle Associates, Inc., June 1983.

Georgia State Department of Education, *Educational Technology: Local Planning Guide*. Atlanta, GA: Georgia State Department of Education, 1985.

Glatthorn, Allan A., *Curriculum Renewal* (Manual for educators to use in curriculum planning and development). Alexandria, VA: Association for Supervision and Curriculum Development, 1987.

Gray, Peter J., "Policy Analysis: A Tool for Setting District Computer Use Policy. Paper and Report Series No. 97," *Northwest Regional Educational Laboratory* [Portland, OR], May 1984.

Justiz, Manuel J., ""Federal Government's Role in Educational Technology" in Founders Conference for the Educational Technology Center," *Harvard University, Educational Technology Center* [Cambridge, MA], Feb. 6, 1984.

Kahin, Brian, "Dissemination of Software in Higher Education," *EDUCOM Software Initiative* [Princeton, NJ], 1986.

Knupfer, Nancy N., "Change, Implementation, Equity: A Model Design for a Computer Education Plan," *University of Wisconsin-Madison* [Madison, WI], 1986.

McCredie, John W., "Strategies for Campus Computing," *Perspectives on Computing*, vol. 2, no. 3, October 1982, pp. 4-10.

McKenzie, Floretta Dukes, "Leadership: The Critical Variable" in *Annual Meeting of the Florida Association of School Administrators* (Orlando, FL, June 16, 1985). Orlando: Florida Association of School Administrators, June 16, 1985.

Murphy, Susanne, "Of Greased Pigs and Moving Targets: Computer Education in the Fast Track," *Journal of Staff Development*, vol. 4, no. 2, November 1983, pp. 35-41.

Neill, Shirley Boes, *High Tech for Schools*: *Problems and Solutions*. *AASA Critical Issues Report*. Arlington, VA: American Association of School Administrators, 1984.

OECD, Centre for Educational Research and Innovation, *International Conference on Education and New Information Technologies* (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

Perelman, Lewis J., *Technology and Transformation of Schools*: *Public Education Strategies for a More Competitive Nation*. Alexandria, VA: National School Boards Assoc., Inst. for the Transfer of Tech. to Education, March 1987.

Ridley, William J. and Hull, Mcallister H. Jr., *Transforming American Education*: *Reducing the Risk to the Nation*. Washington, DC: U.S. Department of Education, Sec. of Educ., Nat. Task Force on Educ. Tech., April 1986.

Terry, Patricia *et al*., "Implementation of a District Computerized Instructional Management System: Barriers and Facilitators," *Far West Laboratory for Educational Research and Development* [San Francisco, CA], April 1986.

Selected References on
Policy

Ackoff, Russell L. and Emery, Fred E., On Purposeful Systems (Formerly Choice, Communication, and Conflict). Seaside, CA: Intersystems Publications, 1972.

Aldrich, Robert F., Belair, Robert R., Braunstein, Yale M., Peyton, David Y., Pogrow, Stanley, Roberston, Lawrence S., and Wildavsky, Aaron B., Issues in Information Policy. Washington, DC: U.S. Department of Commerce, National Telecommunications and Inf. Admin., February 1981.

Anderson, John, "State Support for Computer Dissemination: A Reassessment of California's Public Network for Instructional Development," Technological Horizons in Education, vol. 8, no. 5, September 1981, pp. 54-56+.

Anderson, John J., "Computers in Education: The Pitfalls," Computer Shopper, September 1987, p. 199+.

Back, Frank E., Economics: An Introduction to Analysis and Policy. Englewood Cliffs: Prentice-Hall, Inc., 1968.

Batey, Anne, "Integrating Microcomputers into Science Education. Computer Technology Program Reports to Decision Makers.," Northwest Regional Educational Laboratory [Portland, OR], no. 6, November 1985.

Bell, T. H., "Industrial Policy: Implications for American Education. Delivered by Dr. Robert W. Worthington on Behalf of Dr. T. H. Bell, U.S. Secretary of Education," U.S. Department of Education, Office of the Secretary [Washington, DC], Oct 19, 1983.

Blair, Marjorie and Lobello, Sharon, "People Shaping Educational Computing," Electronic Education, vol. 3, no. 8, May-June 1984, pp. 14-16+.

Bok, Derek, "Looking into Education's High-Tech Future," EDUCOM Bulletin, vol. 20, no. 3, Fall 1985, pp. 2-10.

Bonner, Paul, "Toward a More Thoughtful Use of Computers in Education," Personal Computing, vol. 8, no. 2, March 1984, p. 153+.

Bork, Alfred, Learning with Computers. Bedford, MA: Digital Press, 1981.

Bozeman, William C., "Strategic Planning for Computer-Based Educational Technology," Educational Technology, vol. 24, no. 5, May 1984, pp. 23-27.

Branscomb, Lewis M., "Insights: Technology Promotion: What the Fed Should and Should Not Do," High Technology, vol. 5, no. 5, May 1985, pp. 11,14.

Brink, Dan, "MLJ Computer Corner (Software piracy problems)," Modern Language Journal, vol. 70, no. 3, Autumn 1986, pp. 278-82.

Brodinsky, Ben, Improving Math & Science Education: Problems & Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1985.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Dagnese, Joseph M., "The Time of the Parenthesis: Moving Toward the Future," Special Libraries, vol. 75, no. 2, April 1984, pp. 155-63.

Educational Research Service, ERS School Research Forum, Education for a High Technology Future: The Debate over the Best Curriculum. Arlington, VA: Educational Research Service, ERS School Research Forum, 1983.

Electronic Learning, "ICCE Publishes Statement on Software Copyright Violations," Electronic Learning, vol. 3, no. 2, October 1983, p. 22.

Friedman, Daniel, "Towards Professional Literacy in Educational Computing," Educational Computer, vol. 2, no. 6, Nov.-Dec. 1982, pp. 28-29.

Goldstein, Paul, Schooling, Technology, and Law. Lexington, MA: Lexington Books (D.C. Heath & Co.), 1979.

Gray, Peter J., "Policy Analysis: A Tool for Setting District Computer Use Policy. Paper and Report Series No. 97," Northwest Regional Educational Laboratory [Portland, OR], May 1984.

Hansen, Kenneth H., "Megatrends in American Society: Policy Issues for State Education Agencies. An Issues Analysis Paper.," Northwest Regional Education Laboratory [Portland, OR], June 1983.

Hill, Christopher T., Priest, W. Curtiss, et al., Supporting Innovation: A Policy Study. Cambridge, MA: MIT Center for Policy Alternatives, 1980.

Hollomon, J. Herbert, Allen, Thomas J. Jr., Ashford, Nicholas A., et al., National Support for Science & Technology: An Examination of Foreign Experience: Summary. Cambridge, MA: MIT Center for Policy Alternatives, August 18, 1975.

Hurly, Paul and Hlynka, Denis, "Prisoners of the Cave: Can Instructional Technology Improve Education?," Computers and Education, vol. 8, no. 4, 1984, pp. 427-34.

International Council for Computers in Education, *ICCE Policy Statement on Network and Multiple Machine Software*. Eugene, OR: International Council for Computers in Education, 1985.

Johnston, Jerome, "Computers and the Schools: The Next Decade," *University of Michigan, Inst. for Social Research* [Ann Arbor, MI], March 1985.

Kahin, Brian, "Dissemination of Software in Higher Education," *EDUCOM Software Initiative* [Princeton, NJ], 1986.

Kearsley, G. *et al*., "Two Decades of Computer Based Instruction Projects: What Have We Learned?," *Technological Horizons in Education*, vol. 10, no. 3, January 1983, pp. 90-94.

Keiser, Norman F., *Economics: Analysis and Policy*. New York: John Wiley & Sons, Inc., 1965.

Kramer-Siri, Diane, "ICT: Educational-Industrial Cooperation in Action," *Technological Horizons in Education*, vol. 12, no. 4, November 1984, pp. 107-08.

Lambert, Benjamin J. III *et al*., *Initiatives to Advance Computer-Assisted Instruction*. *Report of the Joint Subcommittee to the Governor and the General Assembly of Virginia*. *House Document No. 34*. Richmond, VA: Virginia State General Assembly, 1984.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," *Stanford University, Stanford Education Policy Institute* [Menlo Park, CA], November 1985.

Levin, Henry M., "Education as a Public and Private Good," *Journal of Policy Analysis and Management*, vol. 6, no. 4, Summer 1987, pp. 628-641.

Machlup, Fritz, *Knowledge: Its Creation, Distribution, and Economic Significance, Volume III, The Economics of Information and Human Capital*. Princeton: Princeton University Press, 1984.

Magaziner, Ira C., "The Rationale for a U.S. Industrial Policy," *Journal of Contemporary Business*, vol. 11, no. 1.

McCredie, John W., "Strategies for Campus Computing," *Perspectives on Computing*, vol. 2, no. 3, October 1982, pp. 4-10.

Mecklenburger, James A., Blom, Don E., and Williams, Cheryl S., "Insider's Letter," *National School Boards Assoc., Inst. for the Transfer of Tecnology to Education* [Alexandria, VA], vol. 2, no. 3, June 1987.

Melmed, Arthur S., "The Technology of American Education: Problem and Opportunity," *Technological Horizons in Education*, vol. 14, no. 2, September 1986, pp. 77-81.

Moursund, David, "The Two Percent Solution -- Funding for Use of Computers," NASSP Bulletin, vol. 68, no. 472, May 1984, pp. 49-54.

Murphy, Brian, "Tom Snyder: Interview," InCider, vol. 2, no. 6, June 1984, pp. 42-44+.

Murphy, Susanne, "Of Greased Pigs and Moving Targets: Computer Education in the Fast Track," Journal of Staff Development, vol. 4, no. 2, November 1983, pp. 35-41.

National Commission on Excellence in Education, A Nation at Risk: The Imperative for Educational Reform. Washington, DC: National Commission on Excellence in Education, 1983.

National Governors' Association Center for Policy Research and Analysis, Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

National School Boards Association, New Technologies: Key to More Productive Schools. Alexandria, VA: National School Boards Association, 1985.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Nora, Simon and Minc, Alain, The Computerization of Society (Introduction by Daniel Bell). Cambridge, MA: MIT Press, 1980.

Norris, William C., "Improving Education Through Technological Innovation," Technological Horizons in Education, vol. 12, no. 10, June 1985, pp. 65-68.

OECD, Centre for Educational Research and Innovation, International Conference on Education and New Information Technologies (Paris, France, July 9-12, 1984). Paris, France: OECD, Centre for Educational Research and Innovation, July 1984.

Olds, Henry F., "The Microcomputer and the Hidden Curriculum," Computers in the Schools, vol. 2, no. 1, Spring 1985, pp. 3-14.

Olson, John and Eaton, Sandra, Case Studies of Microcomputers in the Classroom. Questions for Curriculum and Teacher Education. Education and Technology Series. Ontario, Canada: Ontario Institute for Studies in Education, 1986..

Pantiel, Mindy and Peterson, Becky, "Are Your Teachers Ready for Computers?," Principal, vol. 64, no. 4, March 1985, pp. 44-46.

Peyton, David Y., "The Creation of Information: Property Rights and Subsidies" in Issues in Information Policy (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 75-85.

Pogrow, Stanley, *Education in the Computer Age: Issues of Policy, Practice, and Reform*. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Priest, W. Curtiss and Whitbeck, Caroline, *Alternative Designs for Medical Information Systems -- Consequences for Health and Human Values*. Cambridge, MA: MIT Center for Policy Alternatives, September 1, 1986.

Rubin, Michael Rogers, *Information Economics and Policy in the United States*. Littleton, CO: Libraries Unlimited, Inc., 1983.

Scandura, Joseph M., "An Analysis of the Federal Role in Instructional Technology in the Era of the New Federalism" in *Annual Meeting of the American Educational Research Association* (Montreal, Canada, April 14, 1983). Washington, DC: American Educational Research Association, April 14, 1983.

Sniderman, Ron, *Challenge of the 80's: Technology -- From Dream to Reality. A High Technology Intermediate School District Consortium Report*. Wayne, MI: Wayne County Intermediate School District, undated.

Steier, Lloyd P., "Computer Technology and Education: A Policy Delphi" in *Annual Meetings of the American Educational Research Association* (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, April 18, 1986.

U.S. Congress, Committee on Science and Technology, *Computers and Education. Hearings before the Subcommittee on Investigations and Oversight of the Committee on Science and Technology. U.S. House of Representatives, Ninety-Eighth Congress, First Session* (September 28, 29, 1983). Washington, DC: U.S. Congress, Committee on Science and Technology, 1983.

U.S. Congress, Committee on Ways and Means, *Computer Contribution Act of 1983. Hearing before the Subcommittee on Select Revenue Measures of the Committee on Ways and Means. House of Representatives, Ninety-Eighth Congress, First Session, on H.R. 701* (San Francisco, CA). Washington, DC: U.S. Congress, Committee on Ways and Means, Nov. 11, 1983.

U.S. Congress, Committee on Education and Labor, House of Representatives, *Hearing on Computer Education. Hearing before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eigth Congress, Second Session, on H.R. 3750, H.R. 1134, and H.R. 4628*. Washington, DC: U.S. Congress, Committee on Education and Labor, House of Representatives, 1984.

U.S. Congress, House Committee on Education and Labor, Oversight on Educational Technology. Joint Hearing before the Subcommittee on Select Education of the Committee on Education and Labor. House of Representatives, Ninety-Seventh Congress, Second Session. Washington, DC: U.S. Congress, House Committee on Education and Labor, Sept. 14, 1982.

U.S. Congress, House Committee on Education and Labor, Hearing on National Centers for Personal Computers in Education. Hearing before the Subcommittee on Elementary, Secondary and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-Eighth Congress, First Session on H.R. 1134 to Amend Title III of the Elementary and Secondary Education Act of 1965 to Provide for One or More National Centers for Personal Computers in Education. Washington, DC: U.S. Congress, House Committee on Education and Labor, April 21, 1983.

U.S. Congress, House Committee on Science and Technology, The Computer Literacy Act, H.R. 3750 and the National Educational Software Act, H.R. 4628. Hearing before the Subcommittee on Science, Research and Technology of the Committee on Science and Technology, House of Representatives, Ninety-Eighth Congress, Second Session. Washington, DC: U.S. Congress, House Committee on Science and Technology, no. 107, June 5, 1984.

U.S. Congress, House Committee on Education and Labor, The Education Technology Act. Hearing Before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, Ninety-ninth Congress, Second Session, on H.R. 3102, Serial No. 99-145. Washington, DC: U.S. Congress, House Committee on Education and Labor, 1987.

U.S. Congress, Library of Congress, Congressional Research Service, The Information Science and Technology Act of 1981. Report prepared for the Subcommittee on Science, Research and Technology transmitted to the Committee on Science and Technology. U.S. House of Representatives, Ninety-Seventh Congress, Second Session, Serial DD. Washington, DC: U.S. Congress, Library of Congress, Congressional Research Service, June 1982.

Walker, Decker F., "Computers in Schools. I: Potential & Limitations. II: The Software Problem. Educational Brief," Far West Lab. for Educational Research and Development [San Francisco, CA], February 1984.

White, Mary Alice, "The Electronic Learning Revolution: Questions We Should Be Asking," Quarterly Review of Education, vol. 14, no. 1, Spring 1984, pp. 23-33.

White, Mary Alice, "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21, 1985.

Wilson, Andrew H., Governments and Innovation. Toronto, Canada: Southern Murray (for the Science Council of Canada, Ottawa), no. 26, April 1973.

Woodworth, Robert T., Durkee, Peter H., Delano, Myles S., and Chambers, Edward J., The Entrepreneurial Process: The Roles of Accountants, Bankers and Lawyers. Seattle, WA: University of Washington, December 1970.

Zaltman, Gerald, "Strategies for Diffusing Innovations" in Marketing Analysis for Societal Problems (National Conference on Social Marketing, December, 1972). Urbana-Champaign: University of Illinois, Bureau of Economic and Business Research, 1974.

Zucker, Andrew, "Computers in Education: National Policy in the USA," European Journal of Education, vol. 17, no. 4, 1982, pp. 395-410.

Selected References on

Preview

Ashmore, Timothy M., "Evaluating CAI Material for the Microcomputer" in *Annual Meeting of the Speech Communication Association* (Chicago, IL, November 1984). Annandale, VA: Speech Communication Association, November 1984.

Clay, Katherine ed. , *Microcomputers in Education: A Handbook of Resources* (Preface by LeRoy Finkel). Phoenix, AZ: Oryx Press, 1982.

Currence, Cindy K., "Making Effective Educational Use of Advanced Technology" in *Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Works*. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Harris, Martin L. *et al*., "Guidelines for Educational Software in California Schools. Revised," *California State Dept. of Education* [Sacramento, CA], Sept. 17, 1985.

Hitchcock, Richard B., "The Software Jungle: Guidelines for Evaluating English Computer Programs" in *Annual Meeting of the Developmental Studies Conference* (9th, Athens, GA, April, 1984). Alexandria, VA: ERIC Document Reproduction Service, 1984.

Lathrop, Ann ed. , *The 1986 Educational Software Preview Guide*. San Mateo, CA: County Office of Education, State of California, December 1985.

Leonard, Rex and LeCroy, Barbara, "The Instrument of the Future: Computers in Education," *University of Southern Mississippi* [Mississippi], 1985.

Levin, Henry M. and Meister, Gail R., "Educational Technology and Computers: Promises, Promises, Always Promises," *Stanford University, Stanford Education Policy Institute* [Menlo Park, CA], November 1985.

Mattas, Linda L., *Only the Best: The discriminating Software Guide for Preschool-Grade 12. 1986 Edition*. Carmichael, CA: Education News Service (SchoolTechNews), 1986.

Mitchell, Maurice C., Jr., "Navigating the Software Maze," *VocEd*, vol. 59, no. 3, April 1984, pp. 25-26.

National School Boards Association, *New Technologies: Key to More Productive Schools*. Alexandria, VA: National School Boards Association, 1985.

Neumann, Robert, "How To Find Good Software," ELECTRONIC Learning, vol. 2, no. 2, October 1982, pp. 40-43.

Northwest Regional Educational Laboratory, Social Studies. Microsift Courseware Evaluations. Portland, OR: Northwest Regional Educational Laboratory, 1985.

Owston, Ronald D. and Dudley-Marling, Curt, "A Criterion-Based Approach to Software Evaluation" in Annual Meeting of the American Educational Research Association (70th, San Francisco, CA, April 16-20, 1986). Washington, DC: American Educational Research Association, Apr. 17, 1986.

Software Publishers Assocation, The National Education Association's Educational Computer Service. An Assessment. Washington, DC: Software Publishers Assocation, feb 6, 1985.

Troutner, Joanne, The Media Specialist, the Microcomputer, and the Curriculum. Litteton, CO: Libraries Unlimited, Inc., 1983.

Weaver, Dave and Holznagel, Don, "An Analysis of Available Courseware," Northwest Regional Educational Laboratory [Portland, OR], April 1984.

White, Mary Alice, "An Educated View of Technology," ERIC Document Reproduction Service [Alexandria, VA], March 21, 1985.

Selected References on

Price Discrimination

Baumol, William J. and Ordover, Janusz A., On the Optimality of Public-Goods Pricing with Exclusion Devices. New York: New York University Department of Economics, Center for Applied Economics, November 1975.

Besen, Stanley M., Manning, Willard G., Jr., and Mitchell, Bridger M., "Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem," The Journal of Law & Economics, vol. 21, no. 1, April 1978, pp. 67-95.

Braunstein, Yale M., "The Functioning of Information Markets" in Issues in Information Policy (directed by Jane H. Yurow, edited by Helen A. Shaw). Washington, D.C.: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 57-74.

Cooper, Michael D., "The Economics of Information" in Annual Review of Information Science and Technology. American Society for Information Science, 1973.

Dertouzos, James N. and Wildman, Steven S., "A Study of Economic Issues in the Recording Industry" in Copyright Issues: Cable Television and Performance Rights (Serial No. 28). Washington, DC: U.S. Congress, House Committee on the Judiciary, Subcommittee on Courts, August 1981, pp. 699-778.

Hall, Kent, "The Economic Nature of Information," The Information Society, vol. 1, no. 2, 1981, pp. 143-166.

Hansmann, Henry B., "The Role of Nonprofit Enterprise" in The Economics of Nonprofit Institutions (Edited by Susan Rose-Ackerman). New York: Oxford University Press, 1986, pp. 57-84.

McDonald, Dennis D., "Copyright Can Survive the New Technologies," American Society for Information Science, August 1983, pp. 19-22.

Selected References on

Professionalism

Abernathy, Sandra M. and Pettibone, Timothy J., "Computer Literacy and Certification: What States Are Doing," Technological Horizons in Education, vol. 12, no. 4, November 1984, pp. 117-19.

Association for the Development of Computer-based Instructional Systems, ADCIS Conference Proceedings (27th, New Orleans, Louisiana, February 3-6, 1986). Bellingham, WA: Association for the Development of Computer-based Instructional Systems, February 1986.

Carnine, Doug et al., The Role of Technology in School Improvement. A Presenter's Guide. Research Based Training for School Administrators. Eugene, OR: Oregon University, Center for Educational Policy and Management, 1984.

Dagnese, Joseph M., "The Time of the Parenthesis: Moving Toward the Future," Special Libraries, vol. 75, no. 2, April 1984, pp. 155-63.

Friedman, Daniel, "Towards Professional Literacy in Educational Computing," Educational Computer, vol. 2, no. 6, Nov.-Dec. 1982, pp. 28-29.

Harrison, John S., "Microcomputers and Second Language Teaching: The Second Wave. Q&A," ERIC Clearinghouse on Lanuguages and Linguistics [Washington, DC], November 1986.

Moursund, David, The Computer Coordinator (Computer coordinator responsibilities and necessary qualifications). Eugene, OR: International Council for Computers in Education, 1985.

Murphy, Susanne, "Of Greased Pigs and Moving Targets: Computer Education in the Fast Track," Journal of Staff Development, vol. 4, no. 2, November 1983, pp. 35-41.

Neill, Shirley Boes, High Tech for Schools: Problems and Solutions. AASA Critical Issues Report. Arlington, VA: American Association of School Administrators, 1984.

Pogrow, Stanley, Education in the Computer Age: Issues of Policy, Practice, and Reform. Beverly Hills, CA: Sage Publications, Inc., 1983.

Pogrow, Stanley, "Policy Recommendations for Developing Appropriate Uses of Technology in Schools" in Time for Results. The Governors' 1991 Report on Education. Task Force on Technology: Supporting Work. Washington, DC: National Governors' Association Center for Policy Research and Analysis, 1986.

Selected References on

Property Right

Arrow, Kenneth J., "Economic Welfare and the Allocation of Resources for Invention" in Economics of Information and Knowledge (edited by D. M. Lamberton). Baltimore: Penguin Books, Ltd., 1971.

Cropp, J. A. D., Harris, D. C., and Stern, E. S., Trade in Innovation: The Ins and Outs of Licensing. London: Wiley - Interscience, John Wiley & Sons Ltd, 1970.

Cross, Melvin L. and Ekelund, Robert B., Jr., "A. T. Hadley: The American Invention of the Economics of Property Rights and Public Goods," Review of Social Economy, 1981, pp. 37-50.

Mackaay, Ejan, Economics of Information and Law. Hingham, MA: Kluwer - Nijhoff Publishing, 1982.

Peyton, David Y., "The Creation of Information: Property Rights and Subsidies" in Issues in Information Policy (directed by Jane Yurow, edited by Helen A. Shaw). Washington, DC: U.S. Department of Commerce, National Telecom. & Info. Administration, February 1981, pp. 75-85.

Pogue, Thomas F. and Sgontz, L. G., Government and Economic Choice: An Introduction to Public Finance. Boston: Houghton Mifflin Company, 1978.